OPERATOR MANUAL

61301604768 Rev. C

7800A SERIES FLOOR MOUNTED CART AND UTENSIL WASHER

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GETINGE

7800A SERIES

FLOOR MOUNTED CART AND UTENSIL WASHER

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Related Publications:

Installation Instructions	**61301604981**
Service Manual	**61301605323**
Parts Catalog	**61301605342**

DESCRIPTION OF SYMBOLS AND NOTES IN MANUAL

The following symbols with related notes appear in this manual.

"Warning" notes alert the user to the possibility of personal injury.

"Caution" notes alert the user to the possibility of damage to the equipment.

"Notes" alert the user to pertinent facts and conditions.

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- *POSSIBILITY OF INJURY: Misuse of equipment may result in personal injury.*
- *POSSIBILITY OF EQUIPMENT DAMAGE: Misuse of equipment may result in equipment damage.*

The 7800A Washer is designed to clean and dry case carts, stands, utensils, containers, tote boxes, and similar bulk items. This equipment is NOT intended for use other than expressly stated.
If the 7800A Washer is used in a manner not specified by Getinge, USA, the protection provided by the equipment may be impaired.

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Special Safety Instructions

THE FOLLOWING SAFETY INSTRUCTIONS APPEAR WITHIN THIS MANUAL. READ THEM CAREFULLY BEFORE OPERATING THE UNIT.

"Warning" notes alert the user to the possibility of personal injury.

Running a Cycle **p. 3–3**

RISK OF INFECTION. This washer does not sterilize processed goods. Critical items that present a high risk of infection to a patient must be processed further by terminal sterilization before use. Failure to sterilize critical items could result in infection to patients.

BURN HAZARD. Do not open a washer door during a cycle. Doing so could release hot water through the door opening, resulting in burns to personnel.

DANGER OF FALLING. The compartment's floor may be slippery when wet. When you are inside the compartment, walk carefully to maintain balance and to avoid falls.

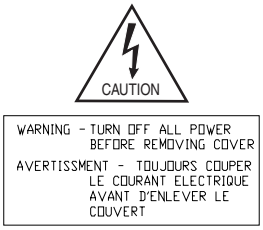
Emergency Stop **p. 3–8**

BURN HAZARD. Do not open a washer door for at least 30 seconds after stopping a processing cycle that was running a wash or rinse phase. This delay allows time for the spray manifolds to stop functioning. Otherwise, hot water could spray out of the door opening, resulting in burns to personnel.

BURN HAZARD. Do not enter a washer compartment immediately after stopping a processing cycle that have been running a drying phase. Allow sufficient time for all metal surfaces within the compartment to cool. Otherwise, hot surfaces may contact and cause burns to personnel.

Safety Labels Used on the Equipment

The following safety labels are used on the 7800A washer:


CAUTION
WARNING - TURN OFF ALL POWER BEFORE REMOVING COVER
AVERTISSMENT - TOUJOURS COUPER LE COURANT ELECTRIQUE AVANT D'ENLEVER LE COUVERT

You must remove all power to the washer before removing the back cover to the washer chamber light assembly.

High voltage is present inside the control box. You must remove all power to the washer before opening the door to the control box.

REPLACE FUSE AS MARKED
WARNING
RISK OF FIRE. REPLACE FUSE AS MARKED.
AVERTISSEMENT
RISQUE D'INCENDIE. REMPLACER AVEC FUSIBLE DE MÊME CALIBRE.

If you change a fuse, you must use an equivalently rated replacement. Refer to “Spare Parts” on page C-2 for a list of spare fuses.

If you are inside the washer when someone closes the door, press firmly on this label on the inside of either door to open the door and, if applicable, stop the washer.

Section 1 General Description

Introduction

The Model 7800A is a fully automatic, large capacity, hydro-spray washer that is used to clean and dry case carts, stands, utensils, containers, tote boxes, and similar bulk items.

Routine operation consists of loading the compartment, closing the door, and touching a START button. The washer starts an operator-selected processing cycle and shuts off when the cycle is complete. The operator then opens the unload end door and removes the load.

Treatment solutions are delivered by an oscillating (back and forth) manifold equipped with spray nozzles. Detergent and rinse aid solutions are dispensed automatically as a standard feature.

Processing cycles are set up using a programmable controller equipped with a touch screen interface (touch control panel). Four cycle definitions are possible. The operator needs only to select and start a cycle.

A standard cycle consists of the following sequential phases: wash, rinse, drying, and exhaust. If the pure rinse option is installed, a purified rinse phase replaces the standard rinse phase. The length of a cycle's phase can be adjusted at the touch control panel.

The washer can be installed in a shallow pit or at floor level. When installed in a pit, the floor of the washer's chamber is level with the room floor, which allows the direct loading and unloading of carts. When the washer is installed at floor level, the floor of the chamber is higher than the room floor. Ramps are then provided as standard equipment for loading and unloading.

Figure 1–1. 7800A Floor Mounted Cart and Utensil Washer

The 7800A washer is available in three models based on load length.

Table 1–1. 7800A Floor Mounted Cart and Utensil Washer

Model	Load Length	Overall Cabinet
78003	80" (2032 mm)	71" W x 108" H x 88" L
78004	98" (2489 mm)	71" W x 108" H x 106" L
78005	112" (2845 mm)	71" W x 108" H x 120" L

Options

The 7800A washer may be equipped with the following options.

Purified Water Rinse

A washer cycle can be programmed to provide a final non-recirculated rinse using water from the customer's purified water source. The purified rinse phase replaces the standard rinse phase in the cycle.

Non-Vented Drying

This optional feature is intended for locations where building exhaust is not available. A vapor condenser package is installed and uses cold water to condense moisture from hot vapors before discharging low humidity air back into the room.

Cycle Printer

A strip chart recorder provides a printed record of performance during each cycle operation. Refer to Appendix A for more information.

Seismic Anchorage

This seismic anchorage kit is available when state or local code requires approved floor anchoring.

Accessories

The following accessories are available for the 7800A washer.

Floor Mounted Ramps

Stainless steel ramps are provided standard with the floor mounted washer.

Utensil and Container Processing Carts

Three processing carts for utensils and rigid containers are available for use with the washer.

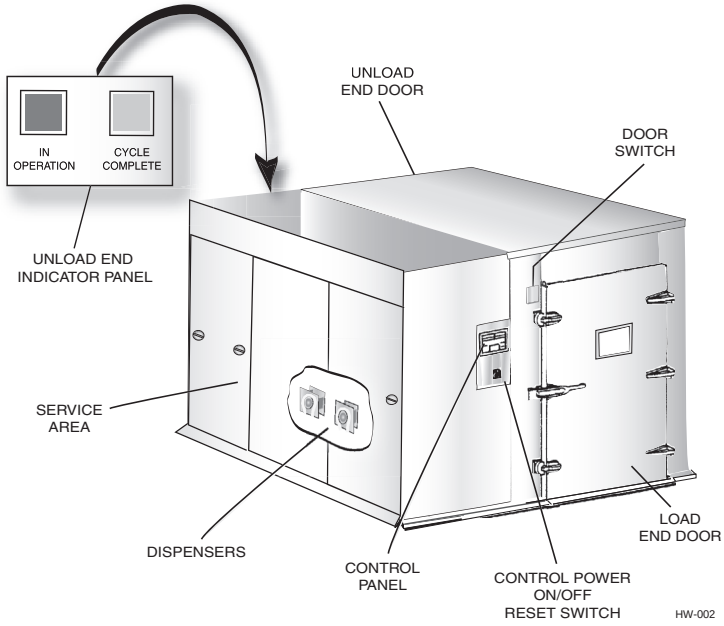
The PCS-UW100 Utensil Wash Cart can accommodate five levels of racks and comes equipped with an assortment of vinyl-coated racks: four racks for large utensils, four racks for medium size utensils, and two racks for smaller utensils.

The PCS-UW101-2 Container Wash Cart provides a maximum of four levels of holding racks. This cart is equipped with two racks to hold rigid containers, lids, and filter covers. the additional space between standard racks allows loading of up to nine containers racked on their short side. An additional container rack increases the capacity to twelve containers that are loaded on the long side.

The PCS-UW101-4 Container Wash Cart provides four sets of racks for up to sixteen rigid containers, including lids and filter covers.

Exterior Components

Figure 1–2. Exterior Components



Unload End Indicator Panel

The IN OPERATION indicator lights yellow for the duration of an ongoing processing cycle. This indicator is located on the unload end of the washer. The CYCLE COMPLETE indicator lights green when a cycle is complete. The light turns off when unloading is complete. This indicator is located on the unload end of the washer.

Doors

Provide access to the load and unload ends of the washer chamber. Each door is equipped with a sealing gasket, an observation window, and safety latches. The safety latches are designed to release a closed door when a moderate amount of physical force is applied against the door from the inside of the chamber.

Door Switches

These proximity switches, mounted on both doors, stop washer operation if a door is opened during a cycle. The switches also prevent the start of a cycle if both doors are not closed properly.

CONTROL POWER ON OFF/RESET Switch

Activates and deactivates the washer controls. A green light illuminates the switch when it is in the ON position.

Touch Control Panel

Provides a touch screen interface to the washer's programmable controller located in the control box. The touch control panel enables the operator to select, program, and monitor processing cycles.

Dispensers

Pumps detergent and rinse-aid agent at the appropriate times in a processing cycle. Refer to "Treatment System" on page 1-7.

Service Area

Provides access to components such as plumbing, valves, pumps, holding tank, control box, and manifold drive motor. The optional service area is enclosed by removable panel sections.

Alarm (Not Shown)

Sounds an audible alert:

- When a cycle is completed.
- If an abort condition occurs.

Holding Tank (Not Shown)

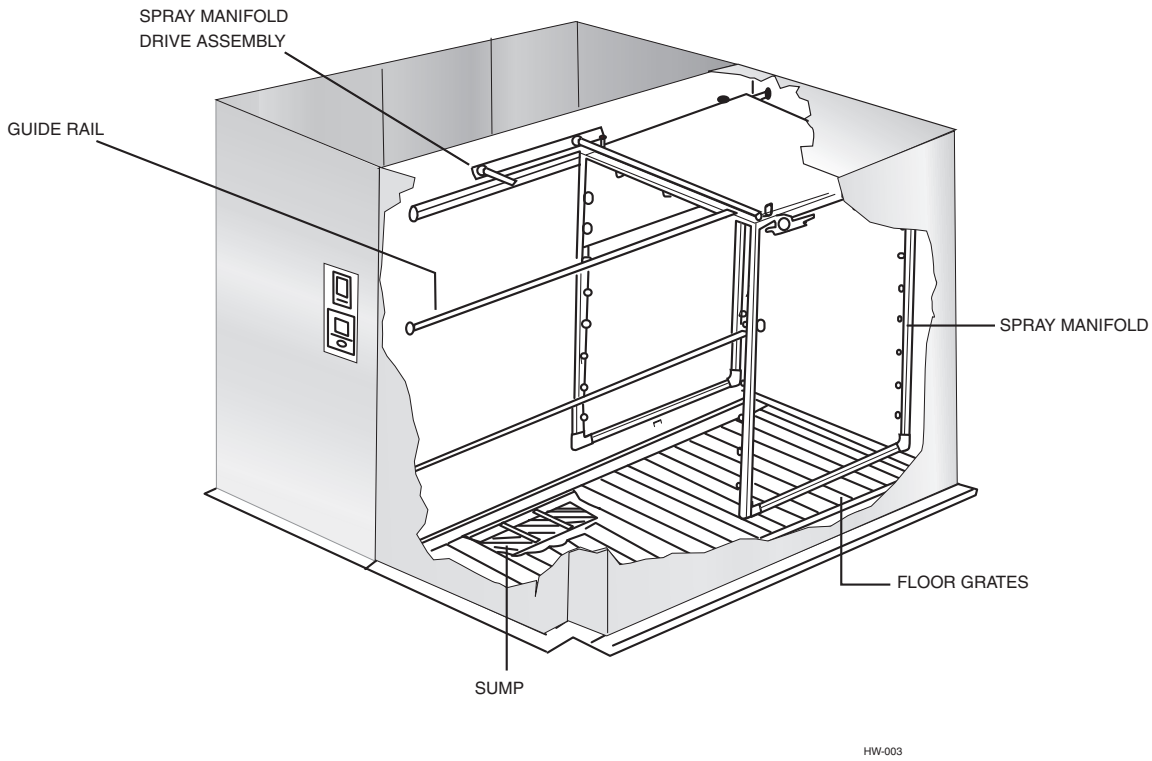
Serves as a reservoir for the detergent solution during the wash phase. Refer to “Treatment System” on page 1-7.

Pit (Not Shown)

Supports the bottom structure of the washer within a minimum 5-inch deep drained enclosure, enabling the washer’s compartment to be situated at floor level for ease of loading and unloading.

Interior Components

Figure 1–3. Interior Components



Spray Manifold Drive Assembly — Continuously moves the manifold system back and forth along the length of the compartment during a processing cycle.

Exhaust Duct — The chamber includes a flanged vent to connect to the building exhaust system. The vent includes an automatic motorized damper that closes during heated cycle phases and opens during exhaust evacuation.

Spray Manifolds — The system consists of two manifold sections suspended from a carriage. Each manifold travels only half of the chamber length, but the manifolds ensure complete coverage of the load. The manifold sections are fitted with spray nozzles. Each section contains two independent wash and rinse manifolds.

Floor Grates — Provide load support and drainage during a processing cycle. The floor can be programmed to tilt during the cycle to prevent pooling and enhance drying. The grates can be removed to expose the sump.

Sump — Directs spent solution to the return pump so that it can be returned to the holding tank.

Heated Air Duct Enables hot air to be circulated through the compartment to dry the load after the final rinse phase.

Guide Rails Restraints for loaded utensil carts to protect the manifolds when the floor tilts during a cycle. There are five rails: three on the “tilt” side of the compartment and two on the other side.

Emergency Stop Cable Safety feature that shuts down the washer when pulled.

Chamber Light (Not Shown) A 75-Watt moisture-proof light assembly illuminates the interior when the control power is on.

Treatment System

Debris Screens These in-line screens prevent jet clog and permit a free flow of wash solution. The debris screens are located in the sump, the holding tank, and in a collar surrounding the return pump.

Solution Holding Tank The insulated external tank is the reservoir for the recirculation of water and is used to prepare the detergent solution prior to the start of the wash phase. The solution is recirculated and then discharged to the drain when the tank cycle count is reached.

Wash Pump The wash pump is a 5 HP unit to provide 40 PSI from the holding tank to the 4 GPM jets used on the wash manifold system.

Rinse Pump The 1.5 HP pump ensures 50 PSI rinse water to the jet spray nozzles on the rinse manifold.

Drain Pan and Sump The sump is sloped to catch and direct spent treatment solutions to the return pump.

Return Pump The pump returns spent solution from the sump to the holding tank during a treatment phase.

Treatment Dispensers The washer is equipped with two dispensing pumps. The first pump pumps rinse aid into the holding tank when it is initially filled for the wash phase and replenishes detergent in the tank before subsequent wash phases. The second pump injects rinse-aid agent directly into the rinse water line.

The detergent pump is controlled by the PLC for concentration. The rinse-aid pump is volume-adjustable. Both pumps are sequenced by the microprocessor.

Drying System The washer is equipped with a steam heat exchanger and a high velocity 1 HP, 1300 CFM blower system. Air is forced through the exchanger and heated to the temperature programmed for the drying phase of the cycle.

Evacuation On vented washers, the automatic damper opens to exhaust hot air to the building vent system at the completion of the drying phase.

Processing Cycle Description

The 7800A washer runs the following processing cycle.

Tank Fill

Hot water fills the holding tank while detergent is injected automatically for a period necessary to bring the solution to the required detergent concentration. As the tank fills, the steam coil brings the water up to the programmed wash temperature of 140 °F to 150 °F (60 °C to 66°C).

Wash

When the tank is full, the wash solution is recirculated under pump pressure and sprayed over the load. When the solution has reached the programmed temperature, phase timing, which can be set to a time of 1 to 15 minutes, begins. The steam coil maintains the wash water at the programmed temperature. At the completion of the wash phase, the wash solution remains in the tank until the next wash. When the tank cycle count is met, the tank is drained. The tank cycle count can be programmed to re-use the wash water for up to 20 cycles. Prior to the start of the second cycle (and subsequent cycles until the cycle count is reached), additional detergent is dispensed into the tank to restore the desired concentration.

Rinse

Fresh hot water is mixed with rinse aid and sprayed over the load for the programmed time of 1 to 5 minutes. The rinse water is boosted by a steam heat exchanger and can be programmed to a temperature from 120 °F to 180 °F (49 °C to 82 °C). Spent rinse water is returned to the holding tank, which is replenished with detergent for use in the wash phase of the next cycle.

Purified Rinse

When the purified rinse option is installed, this phase takes the place of the standard rinse. A purified water rinse is sprayed over the load for the programmed time of 30 seconds to 3 minutes. The purified rinse phase replaces the standard rinse phase in the cycle. The temperature of the purified rinse water is boosted by the steam heat exchanger and can be programmed to a temperature from 120 °F to 180 °F (49 °C to 82 °C). Spent purified rinse water is returned to the holding tank as it is in the rinse phase.

Drying

A high velocity blower forces air through a steam heat exchanger and directly over the load for very effective drying. The temperature of the air from the heater can be set for 200°F to 240°F (93°C to 115°C) and the drying time can be set for 0 to 15 minutes. The dryer air passes over a condenser coil to remove moisture from the air.

Exhaust

After the drying phase, the power damper of vented washers automatically opens for 0 to 99 seconds to exhaust moisture-laden hot air into the connected vent system.

Tank Drain

When the washer reaches its tank cycle count, the water is drained from the tank and refilled. Cold water is mixed with the drain water to ensure a temperature of 140°F or lower.

Section 2 Touch Control Panel

Overview

The touch control panel provides the operator with a touch screen interface to the programmable logic controller located in the control box.

The controls on the panel enable the operator to:

- Select and start a processing cycle.
- Review the phase settings for a cycle.
- Program or edit the phase duration and temperature for a cycle.
- Monitor the status of the cycle in progress.
- Manually drain the holding tank and sump.
- Fill the holding tank with fresh wash water.
- Extend the length of the phase in progress.
- Stop the cycle in progress.

Additional password-protected controls enable supervisory personnel to:

- Disable alarms for low levels in the detergent and rinse aid dispensers.
- Prime and run the detergent and rinse aid dispenser pumps.
- Change the tank cycle count.
- Change the supervisor password.
- Display and update the load counters and time/date display.
- Specify the desired detergent concentration in the wash solution.

Description

NOTE

To activate the touch control panel, the PC POWER switch located near the bottom in the control box must be set to ON. This switch is normally set to ON at installation and left in that position.

When the touch control panel is activated, an indicator in the lower-left corner of the panel lights green and the screen displays the Power Up panel until communications with the processor is established and the Main panel appears. Although the panel is activated, the Main panel displays the CONTROL POWER IS OFF message until control power is applied.

The touch control panel is operative when the washer's CONTROL POWER ON OFF/RESET switch is set to ON. When the panel is operative, the START button replaces the CONTROL POWER IS OFF message.

NOTE

- *All panel functions are inaccessible when control power is off.*
- *If the touch control panel remains idle and untouched for a one-hour period, the "screen saver" feature causes the panel to go dark. To illuminate the panel, touch the panel once anywhere on the screen.*

Main Panel

Figure 2–1. Main Panel

SELECT CYCLE 1/2/3/4 / CYCLE 1/2/3/4

Enables you to select the desired processing cycle. When you touch a button, the label changes to CYCLE 1/2/3/4.

DAILY LOAD COUNT

Displays the washer's current load count (the number of cycles that the washer has processed since the resetable counter was set).

TANK CYCLES REMAINING

Displays the number of cycles that are remaining before the holding tank is automatically drained and filled with fresh wash solution. This number counts down from the TANK CYCLE COUNT value defined on the Supervisor panel (see page 2-11) to zero.

Washer Option Status Area

The middle area of the panel displays the washer model and up to three of the following messages:

- WARNING: THERMOCOUPLE BYPASS ACTIVE — displayed when thermocouple bypass is activated on the Service panel. Thermocouple bypass allows you to operate the washer when a thermocouple is defective by suppressing thermocouple error messages. This area is blank if the thermocouple bypass is not activated.
- WARNING: TEMPERATURE BYPASS IS ACTIVE — displayed when temperature controls are bypassed on the Service panel. When temperature bypass is active, the cycle phases are allowed to continue even if temperature setpoints are not reached. This area is blank if the temperature bypass is not activated.
- FLOOR TILT IS OFF — displayed if the floor tilt feature is disabled for the selected cycle. This area is blank if floor tilt is enabled.

SUPERVISOR AND SERVICE SCREEN

Displays a data entry keypad on which you must enter the supervisor password to access the Supervisor panel. This panel (see page 2–11) enables supervisory personnel to:

- turn protection for a cycle on or off.
- enable or disable detergent and rinse aid low level alarms.
- prime the detergent and rinse aid pumps.
- change the tank cycle count.
- change the supervisor password.
- specify the desired detergent concentration in the wash solution.
- change the washer's system time and date.
- display and reset the washer load counts.

CYCLE REVIEW AND PROGRAM / CYCLE REVIEW ONLY

If the cycle is not protected (the button label is CYCLE REVIEW AND PROGRAM), touching this button displays the Cycle Setup panel (see page 2–6) for the selected cycle, which enables you to:

- change the duration of any phase.
- change the temperature for the wash, rinse (or pure rinse, if installed), or drying phase.
- set whether the floor tilt is used during the cycle.
- enable or disable pure rinse for the cycle.

If the selected cycle is protected (the button is labeled CYCLE REVIEW ONLY) touching this button displays the Cycle Review panel (see page 2-8), which allows you to view cycle parameters and the floor tilt function.

TIME and DATE

Displays the current time and date that are programmed into the washer.

DETERGENT / RINSE AID Status Indicators

These indicators display information about the detergent and rinse aid dispensers. One of these messages is displayed:

- DETERGENT/RINSE AID READY — this is the normal state for the dispenser when it is not pumping liquid.
- DETERGENT/RINSE AID RUNNING — the dispenser is currently pumping detergent or rinse aid into the wash or rinse water, respectively.
- DETERGENT/RINSE AID LOW FAULT — the detergent or rinse aid supply is low and must be refilled in order to run another cycle.
- DETERGENT/RINSE AID LOW FAULT OVERRIDE ON — the dispenser low level fault has been disabled and the cycle continues to run with no detergent or rinse aid being pumped into the treatment system.

Message Display Area

Displays status and error messages (refer to the table on page 3-7 for a list of messages).

FAULT RESET

Clears the error condition in the washer's processor. If the error condition is caused by faulty equipment, you must correct the problem before you clear the fault and continue to operate the washer. If the fault occurs during a cycle, you must restart the cycle.

CONTROL POWER IS OFF / START

This button is labeled CONTROL POWER IS OFF when power to the washer is off. This label changes to START when the CONTROL POWER ON OFF/RESET switch is powered on.

NOTE

If the tank is empty, touching START begins to fill the tank. When the tank is full, the wash phase begins, although phase timing does not begin until the wash solution reaches its programmed temperature.

FILL TANK / TANK FILLING

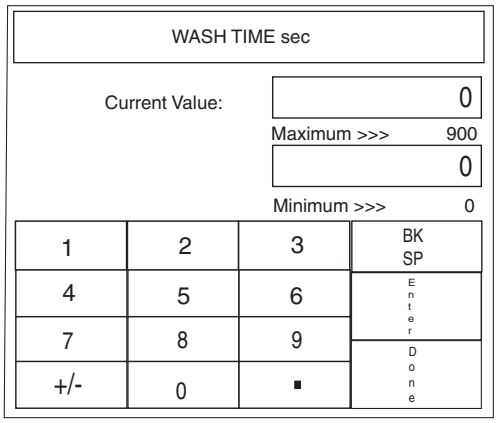
The FILL TANK button enables you to fill the tank manually before starting a cycle, assuming that the tank is already drained. During the fill process (manual or automatic), the buttons's label changes to TANK FILLING.

DRAIN TANK/SUMP / TANK/SUMP DRAINING

Manually drains the washer's sump and holding tank. After you touch this button, its label changes to TANK/SUMP DRAINING until all of the liquids are removed.

Numeric Keypad Panel

Figure 2–2. Numeric Keypad Panel



The top of the panel displays the parameter value that you are changing along with the value currently assigned to the parameter. As you touch the keys for the new value, the value is displayed. You can use the BK SP key to undo incorrect entries.

NOTE

If applicable, the minimum and maximum limits to the value are displayed. The panel does not allow you to enter a value that falls outside this range.

1. Use the keypad to type the desired value and then touch Enter.
   Your entry now appears in the Current Value field.
2. Touch Done to close the Numeric Keypad panel and return to the applicable panel.

Cycle Setup Panel

The Cycle Setup panel appears when you touch CYCLE REVIEW AND PROGRAM on the Main panel (the selected cycle is not protected). If the washer has the standard rinse, the panel shown in Figure 2–3 appears. If the purified rinse option is installed on your washer, the panel shown below in Figure 2–4 appears.

Figure 2–3. Cycle Setup Panel (Standard Rinse)

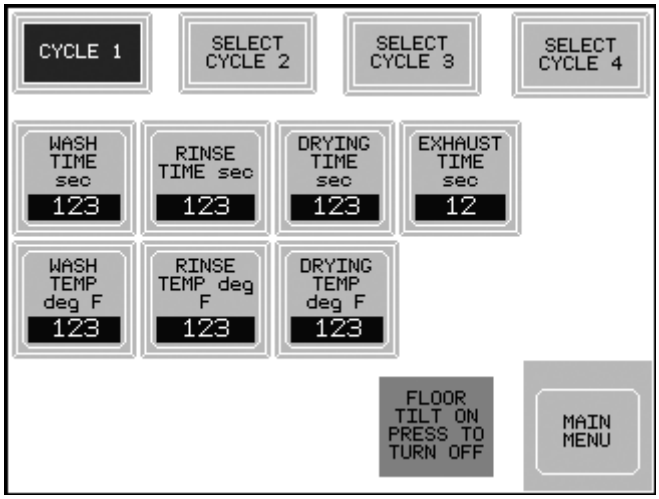
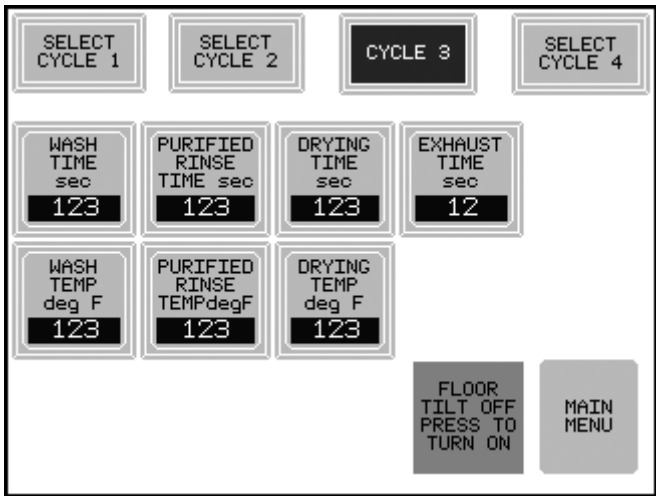


Figure 2–4. Cycle Setup Panel (Purified Rinse Option)



SELECT CYCLE 1/2/3/4 / CYCLE 1/2/3/4

These indicators display CYCLE 1/2/3/4 for the cycle that was selected when you touched CYCLE REVIEW AND PROGRAM from the Main panel. This is the cycle whose parameters are displayed and that you can change. The other three indicators display SELECT CYCLE 1/2/3/4. Touching one of these buttons selects that cycle.

NOTE

The cycle that is selected on this panel when you return to the Main panel becomes the current cycle.

WASH/RINSE/PURIFIED RINSE/DRYING/EXHAUST TIME

Displays the duration for the wash, rinse or pure rinse, drying, and exhaust phases. Touching one of these buttons displays a data entry keypad, which enables you to change the timing value for that phase.

WASH/RINSE/PURIFIED RINSE/DRYING TEMP

Displays the current temperature setpoints for the wash, rinse or pure rinse, and drying phases. Touching either of these buttons displays a data entry keypad, which enables you to change the temperature value for that phase.

FLOOR TILT ON PRESS TO TURN OFF /
FLOOR TILT OFF PRESS TO TURN ON

Allows you to enable or disable the power floor tilt feature for the cycle. Touch the button as required to enable or disable the floor tilt feature.

MAIN MENU

Returns you to the Main panel. The cycle that was displayed when you touched this button is the currently selected cycle on the Main panel.

Cycle Review Panel

The Cycle Setup panel appears when you touch CYCLE REVIEW ONLY on the Main panel (the selected cycle is protected). If the washer has the standard rinse, the panel shown in Figure 2–3 appears. If the purified rinse option is installed on your washer, the panel shown below in Figure 2–4 appears.

Figure 2–5. Cycle Review Panel (Standard Rinse)

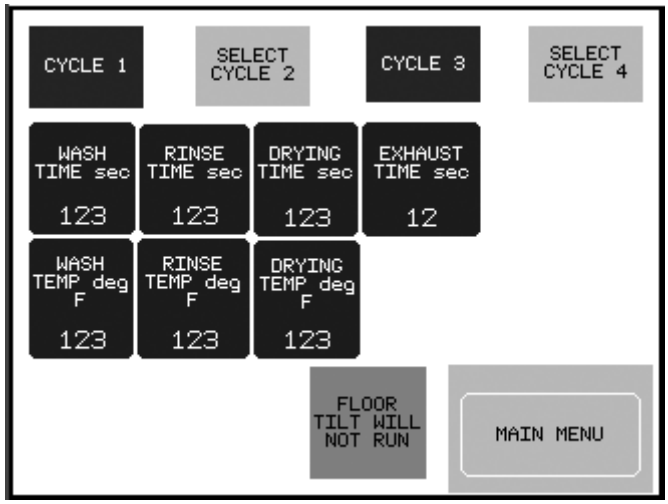
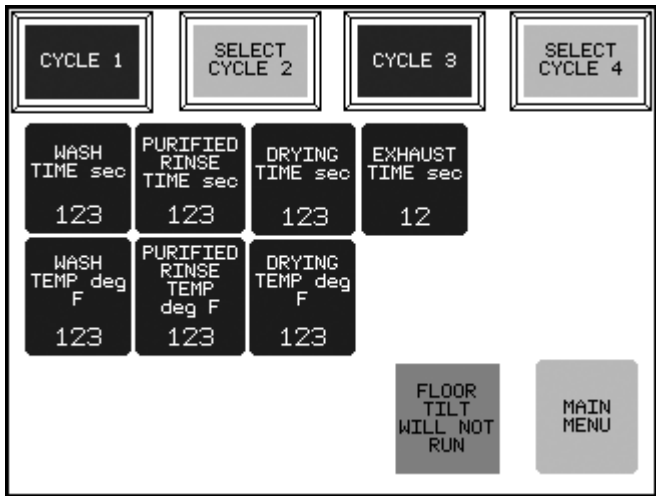


Figure 2–6. Cycle Review Panel (Purified Rinse Option)



These indicators display CYCLE 1/2/3/4 for the cycle that was selected when you touched SELECT CYCLE 1/2/3/4 from the Main panel. The other three indicators display SELECT CYCLE 1/2/3/4.

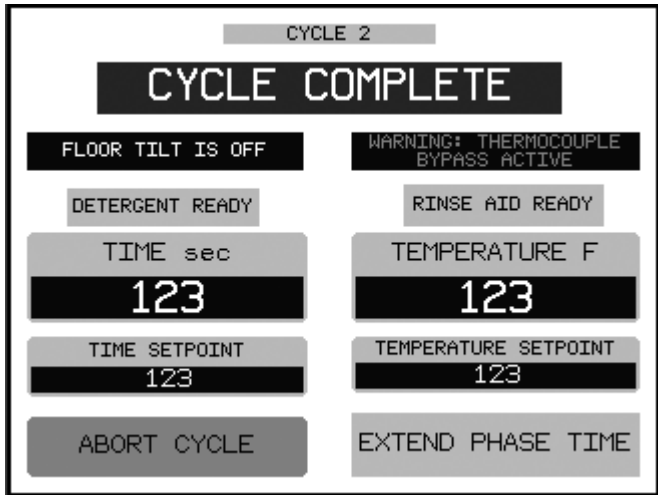
NOTE

The cycle that is selected on this panel when you return to the Main panel is the current cycle.

The remaining indicators on this panel display the current parameters for the selected cycle. The indicators on this panel are similar to those that appear on the Cycle Setup panel (see page 2-6), except that you cannot change any of these parameters and that the indicators on this panel are light blue (they are dark blue on the Cycle Setup panel). The floor tilt button is green if the feature is enabled and red if disabled.

In Cycle Panel

Figure 2–7. In Cycle Panel



This panel appears while a cycle is processing and displays progress information about the cycle, including status and error messages. You can use this panel to stop or extend the time of a cycle.

CYCLE 1/2/3/4

Displays the cycle that is currently selected.

Message Display Area

Displays status and error messages (refer to the table on page 3-7 for a list of messages).

FLOOR TILT IS OFF / WARNING: TEMPERATURE BYPASS IS ACTIVE

The first message is displayed when the floor tilt is disabled for the cycle; the second when temperature controls are bypassed. If both states are true, the panel toggles between the two messages.

WARNING: THERMOCOUPLE BYPASS ACTIVE

This message is displayed when the thermocouple bypass is activated.

DETERGENT and RINSE AID Status Indicators

These indicators display information about the detergent and rinse aid dispensers. One of these messages is displayed:

- DETERGENT/RINSE AID READY — this is the normal state for the dispenser when it is not pumping liquid.
- DETERGENT/RINSE AID RUNNING — the dispenser is currently pumping detergent or rinse aid into the wash or rinse water, respectively.
- DETERGENT/RINSE AID LOW FAULT — the detergent or rinse aid supply is low and must be refilled in order to run another cycle.
- DETERGENT/RINSE AID LOW FAULT OVERRIDE ON — the dispenser low level fault has been disabled and the cycle continues to run with no detergent or rinse aid being pumped into the treatment system.

Current TIME

Displays the time remaining (in seconds) for the current phase of the cycle.

Current TEMPERATURE

Displays the measured temperature (in °F) for the current phase of the cycle. The temperature that is measured depends on the phase:

- Wash — water in the holding tank.
- Rinse/Purified Water Rinse — rinse water (steam boosted hot water).
- Drying — heated air temperature in the dryer.
- Exhaust — not measured.

TIME SETPOINT

Displays the time duration that is programmed for the phase.

TEMPERATURE SETPOINT

Displays the target temperature that is programmed for the phase (does not apply to exhaust).

ABORT CYCLES

Suspends operation of the washer and returns you to the Main panel.

EXTEND PHASE TIME / PHASE EXTENDED

Extends the duration of the current phase of a cycle by a preset time. The phase is extended by this amount each time you touch the button.

The default value for this extension is 10 seconds, although service personnel can change this value at any time to suit the needs of your facility.

Supervisor Panel

Figure 2–8. Supervisor Panel

3-10

This panel enables a supervisor to perform these administrative functions:

- specify one or more processing cycles as “protected.”
- disable the low level dispenser alarms.
- prime the dispenser pumps.
- change the tank cycle count.
- change the supervisor password.
- enter the desired concentration for the detergent in the wash solution.
- reset the daily load counter.
- set the time and date.

PROTECT CYCLE 1/2/3/4 / CYCLE 1/2/3/4 IS PROTECTED

When a button is labeled PROTECT CYCLE n, touching the button protects the cycle from changes by a user to the time, temperature, and dispenser values. When the button is labeled CYCLE n IS PROTECTED, touching this button changes the cycle to “unprotected,” which means that an operator can change the cycle parameters using the Cycle Setup panel (page 2-6).

DISABLE LOW RINSE AID/DETERGENT FAULT / LOW RINSE AID/DETERGENT FAULT DISABLED

Disables the audible alarm when the detergent or rinse aid liquid supply is low and allows you to start new cycles despite the low level fault. Touching this button changes the label to LOW RINSE AID/DETERGENT FAULT DISABLED.

NOTES

- *When you disable the dispenser alarms, the detergent and rinse aid indicators on other panels displays DETERGENT/RINSE AID LOW FAULT OVERRIDE ON.*
- *When the alarms are disabled, it is possible to run a cycle without any detergent or rinse aid.*

PRIME RINSE AID/DETERGENT PUMP /
RINSE AID/DETERGENT PUMP PRIMING

Touching one of these buttons starts the pump on the corresponding dispenser. The pump runs until you touch the button again.

TANK CYCLE COUNT

Displays a data entry keyboard, which enables you to specify the number of cycles (up to 20) that run before the tank is drained and refilled.

ACCEPT TANK CYCLE COUNT CHANGE

Applies the change you made using the TANK CYCLE COUNT button and displays the value on the Main panel. The washer must then run that number of cycles before the holding tank is automatically drained.

When you change the tank cycle count, you must drain the tank. The tank cycle count is reset to the new count, regardless of how many cycles have already been run with the wash solution currently in the tank. Failure to drain the tank can reduce the effectiveness of the washer cycles.

CHANGE SUPERVISOR PASSWORD

Touching this button displays a data entry keypad, which enables you to change the supervisor password.

TIME and DATE

Displays the current time and date that are programmed into the washer.

SET TIME AND DATE

Displays the Time and Date panel (see page 2–13), which enables you to set the current date and time, and to select standard or military time.

DETERGENT CONCENTRATION oz per gal

Displays a numeric keypad panel that enables you to enter the recommended concentration for the detergent in the wash solution. The washer's processor uses this value to determine how long to run the detergent dispenser pump. The valid range for the concentration is 0.05 to 2.00 oz/gal.

GO TO DAILY CYCLE COUNT

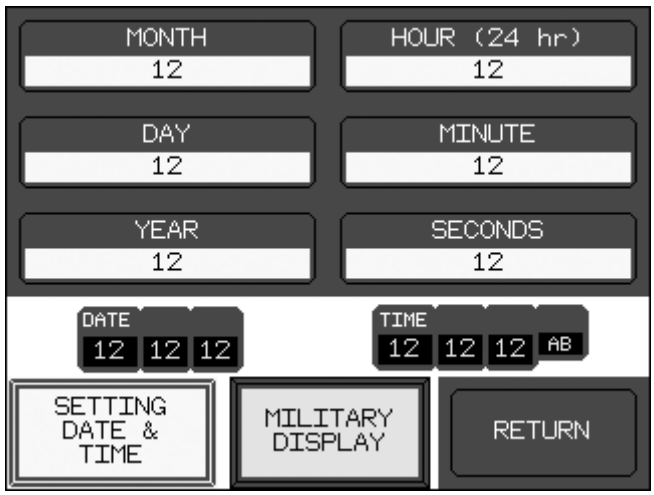
Displays the Cycle Count panel (see page 2–14), which enables you to view the machine load count and to view and reset the daily load count.

GO TO MAIN SCREEN

Returns you to the Main panel.

Time and Date Panel

Figure 2–9. Time and Date Panel



This panel appears when you touch the SET TIME AND DATE button on the Supervisor panel. The current date and time are displayed on the panel.

MONTH / DAY / YEAR / HOUR / MINUTE / SECONDS

When you touch one of these buttons, a data entry keypad appears, which enables you to set the corresponding date or time parameter.

NOTE

You must enter the HOUR as a 24-hour value independent of whether the system is currently set for STANDARD DISPLAY or MILITARY DISPLAY.

SET DATE AND TIME / SETTING DATE & TIME

Updates the system date and time with the current values displayed in this panel. The button label momentarily changes to SETTING DATE & TIME.

STANDARD DISPLAY / MILITARY DISPLAY

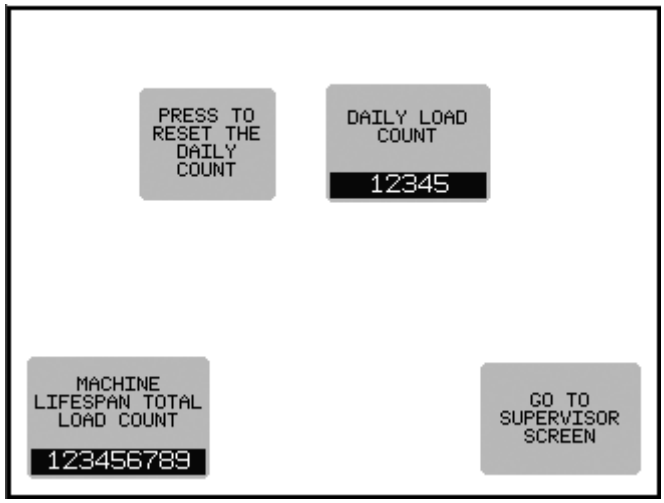
Enables you to toggle between the display of the time in standard (10:30 PM, for example) and military (2230) form.

RETURN

Returns you to the Supervisor panel.

Cycle Count Panel

Figure 2–10. Cycle Count Panel



RESET THE DAILY COUNT

Touching this button resets the DAILY LOAD COUNT to 0.

DAILY LOAD COUNT

Displays the number of cycles that have run since the last time this counter was reset.

MACHINE LIFESPAN LOAD COUNT

Displays the number of cycles that have run since the washer was installed. You cannot reset this counter.

GO TO SUPERVISOR SCREEN

Returns you to the Supervisor panel.

Section 3 Operating Instructions

General Washer Operation

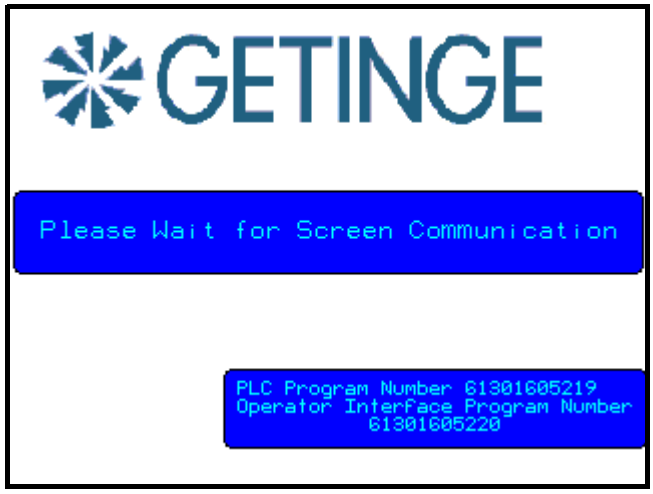
Starting Up the Washer

NOTE

To activate the touch control panel, the PC POWER switch located near the bottom in the control box must be set to ON. This switch is normally set to ON at installation and left in that position.

1. If necessary, set the PC POWER switch to ON.
   The Power Up panel appears momentarily.

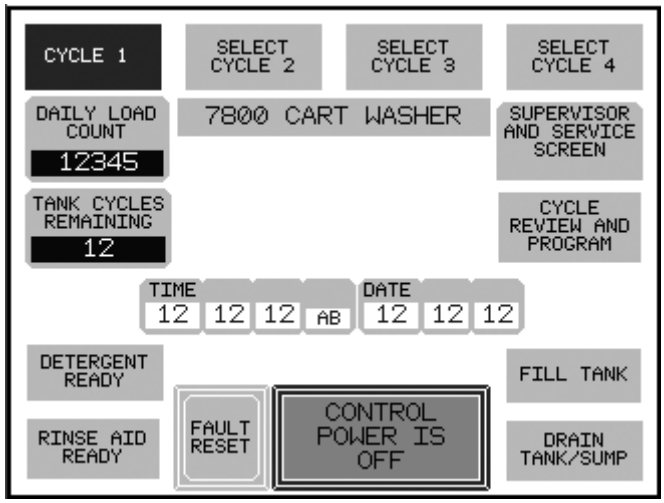
Figure 3–1. Power Up Panel



startup

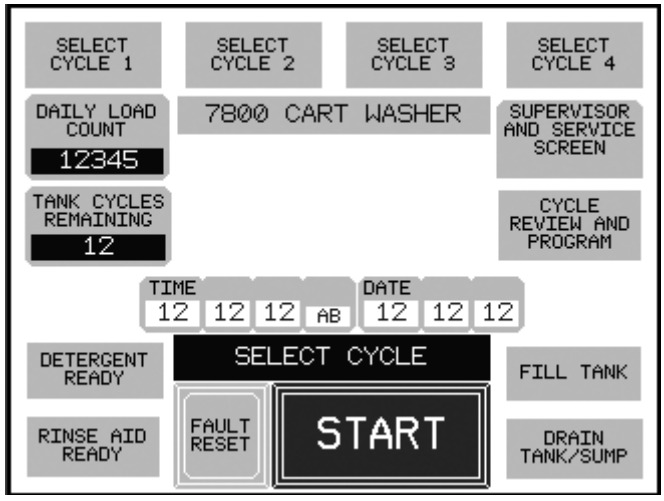
When the processor has established communications with the screen, the Main panel appears.

Figure 3–2. Main Panel



2. To start up the washer, set the CONTROL POWER ON OFF/RESET switch to ON.
   The CONTROL POWER IS OFF button changes to START.

Figure 3–3. Main Panel



Loading a Utensil Cart

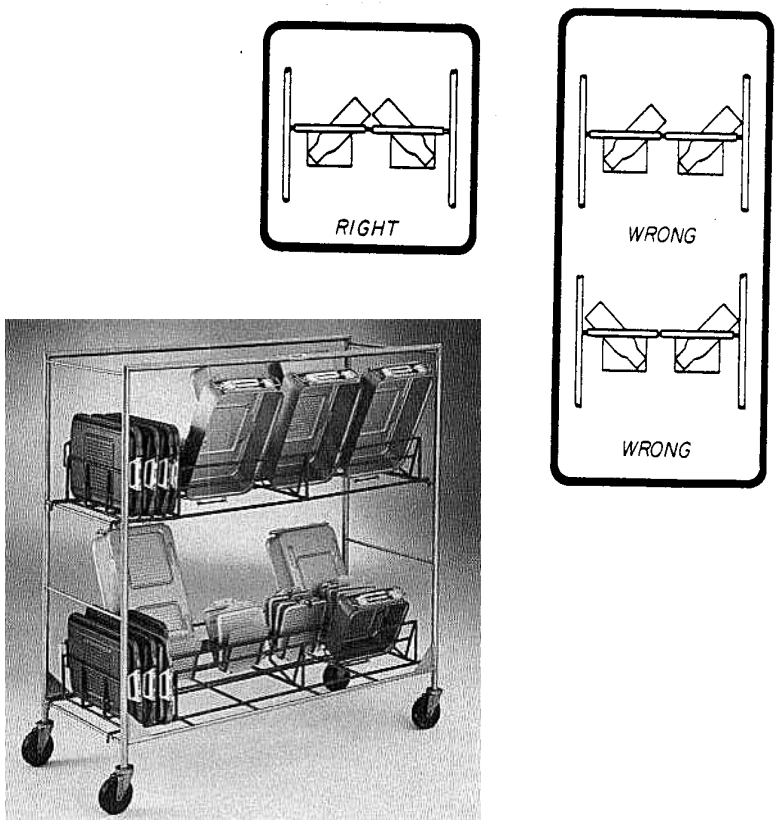
The utensil and container wash carts are designed to hold an assortment of racks. You can interchange racks as needed simply by lifting the rack off the cross rods, tilting it approximately 30 degrees, and either moving it to a different set of cross rods or removing it altogether.

When loading racks on a cart:

- Install the lowest rack first and work upwards.
- Make sure that the angled side of each rack faces the outside of the cart. This ensures that the items placed on the racks drain properly during a processing cycle.

Figure 3–4 below illustrates correct and incorrect ways to load a cart.

Figure 3–4. Utensil Wash Cart



Running a Cycle

The instructions in this section apply to the daily operation of the washer. The instruction assumes that the washer has been properly installed and pre-tested, the washer is powered on, the compartment is clean, cycles have been programmed, the liquid dispensers have been set up, and optional equipment is ready for operation.

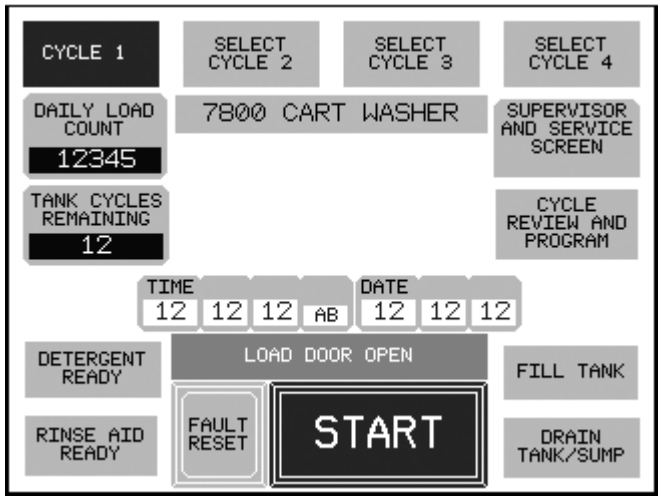
- *Risk of infection. This washer does not sterilize processed goods. Critical items that present a high risk of infection to a patient must be processed further by terminal sterilization before use. Failure to sterilize critical items could result in infection to patients.*
- *Burn hazard. Do not open a washer door during a cycle. Doing so could release hot water through the door opening, resulting in burns to personnel.*
- *Burn hazard. When a cycle is complete, washed goods are extremely hot. You must allow adequate cooling time before handling.*
- *Danger of falling. The compartment's floor may be slippery when wet. When you are inside the compartment, walk carefully to maintain your balance and to avoid falls.*

When loading the washer, make sure that nothing obstructs the back and forth movement of the motorized spray manifolds. Careless loading could result in damage to goods, equipment, or washer components.

- *The inside of the washer compartment is equipped with an emergency stop cable. If a door closes while you are inside the washer and a cycle starts up, pull on the emergency stop cable to stop washer operation immediately. Additionally, the load and unload end doors on the washer are equipped with safety latches that allow the doors to be forced open from the inside. If a door closes while you are inside the washer compartment, shove the latched side of the door to disengage the safety latches and spring the door back open.*
- *If the washer's holding tank is empty, you can touch the FILL TANK button on the Main panel to start filling the tank, and to allow the water to heat up while you are loading the washer.*

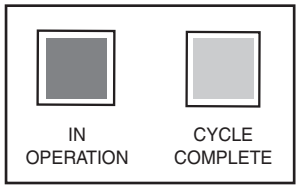
1. Open the load end door and move the load into the washer compartment.
   The message LOAD DOOR OPEN appears on the touch control panel.

Figure 3–5. Main Panel



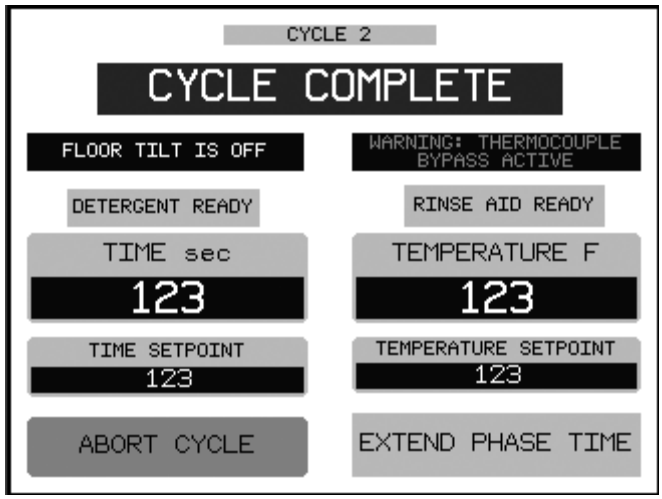
2. Close the door securely.
   The green button (CYCLE 1/2/3/4) at the top of the panel indicates the cycle that is currently selected.
3. If desired, touch one of the CYCLE buttons to change to another cycle.
4. Touch START.
   On the unload end indicator panel (Figure 3–6), the yellow IN OPERATION indicator is illuminated.

Figure 3–6. Unload End Indicator Panel



The In Cycle panel appears.

Figure 3–7. In Cycle Panel



The selected processing cycle begins after a short delay (5 seconds by default) so that any residual pressure within the compartment can be relieved.

NOTE

This 5 second delay can be changed at any time by service personnel.

If necessary, the holding tank starts to fill. When the holding tank is full, circulation of the wash solution begins. When the water temperature is at the programmed temperature, timing for the phase begins.
Refer to Table 3–1 on page 3-7 for the list of messages that may be displayed during a processing cycle.
During normal processing, the In Cycle panel (Figure 3–7) displays the time remaining, temperature, and time and temperature setpoints for the current phase of the cycle. You can add time to the phase by touching EXTEND PHASE TIME (see “Extending a Cycle” on page 3-9).
Refer to “Error Messages” on page 5-1 for a list of error messages that may be displayed during the cycle.
When the cycle is complete, the yellow IN OPERATION indicator is extinguished on the unload end indicator panel, the green CYCLE COMPLETE indicator is illuminated, an intermittent alarm sounds, and the Main panel appears.

5. Open the unload end door and remove the load.
The alarm stops when you open the door. UNLOAD IN PROGRESS appears on the touch control panel.
6. Close the unload end door.

While the unload end door is open, the panel displays UNLOAD IN PROGRESS. When the unload end door is closed, the display changes to UNLOAD COMPLETE, then to READY.

Normal In-Cycle Messages

The table below provides a list of messages that may be displayed during normal error-free processing. If any error conditions occur that require stopping or restarting the cycle, refer to “Error Messages” on page 5-1 for a list of these messages and corrective actions.

Table 3–1. Normal In-Cycle Status Messages

MESSAGE	COLOR	EXPLANATION
ALL CYCLES DID NOT COMPLETE PRESS FAULT RESET	Yellow	The washer was stopped before it could complete the current cycle.
CONDENSING	Green	The condenser in the dryer is running at the beginning of the drying phase.
CYCLE ABORTED	Yellow	The washer was stopped before it could complete the current cycle. After you clear the condition that caused the message, the “ALL CYCLES DID NOT COMPLETE; PRESS FAULT RESET” message (above) appears.
CYCLE COMPLETE	Green	The exhaust phase is complete and the washer is ready to unload. The light on the unload end is also lit.
DETERGENT LOW	Red	The detergent dispenser’s supply is almost empty. The washer will not operate until the detergent supply is filled, or until you override the message using the DISABLE LOW DETERGENT FAULT button on the Supervisor panel (refer to “Disable Low Dispenser Supply Faults” on page 3-19).
DETERGENT REFRESH	Yellow	Since the condenser and rinse water returned to the tank dilutes the wash solution, the detergent dispenser is pumping to increase the detergent concentration to the recommended level.
DRYER HEATING	Yellow	The dryers are heating to the temperature setpoint for the drying phase of the current cycle.
DRYING PHASE	Green	The drying phase is currently running. The panel displays the time remaining for this phase.

Table 3–1. Normal In-Cycle Status Messages (Continued)

MESSAGE	COLOR	EXPLANATION
EXHAUST PHASE	Green	The exhaust phase is currently running. The panel displays the time remaining for this phase.
LOAD & UNLOAD DOORS OPEN	Red	Both doors are open.
LOAD DOOR OPEN	Red	The load end door is open.
PURIFIED WATER RINSE PHASE	Green	The pure rinse phase is currently running. The panel displays the time remaining for this phase.
READY	Blue	There are no error conditions and the washer is ready to start a cycle.
RINSE AID LOW	Red	The rinse aid dispenser's supply is almost empty. The washer will not operate until the rinse aid supply is filled, or until you override the message using the DISABLE LOW RINSE AID FAULT button on the Supervisor panel (refer to "Disable Low Dispenser Supply Faults" on page 3-19).
RINSE HEATING	Yellow	Steam is being applied to the booster heater during the rinse phase. This message appears momentarily as the rinse water is brought to the temperature setpoint.
RINSE PHASE	Green	The rinse phase is currently running. The panel displays the time remaining for this phase.
SELECT CYCLE	Yellow	Power has just been applied and you have not yet selected a cycle to run.
START HOLD FOR DETERGENT	Yellow	Detergent is being added to the tank after a fresh fill. The cycle does not start until the detergent dispenser has pumped the required amount of detergent.
SUMP DRAINING	Green	Water is being removed from the sump.
TANK DRAINING	Green	Water is being removed from the holding tank.

Table 3–1. Normal In-Cycle Status Messages (Continued)

MESSAGE	COLOR	EXPLANATION
TANK EMPTY PRESS “FILL TANK”	Yellow	When the washer is initially powered up (at the beginning of the day, for example) or after a manual drain, you must touch the FILL TANK button.
TANK FILLING	Green	The holding tank is being filled with hot water for the wash phase.
TANK HEATING	Yellow	The water in the holding tank is being heated prior to the start of the wash phase.
UNLOAD DOOR OPEN	Red	The unload end door is open.
UNLOAD IN PROGRESS	Yellow	Displayed when you open the unload end door after the cycle is complete.
WASH PHASE	Green	The wash phase is currently running. The panel displays the time remaining for the wash phase.
WASH HEATING	Yellow	The tank water fell below the temperature limit during the wash phase.

Extending a Cycle

You can increase the processing time for any phase (except exhaust) by using the EXTEND feature.

1. From the In Cycle panel (see Figure 3–6 on page 3–5), touch EXTEND PHASE TIME.
   The phase is increased by a preset amount of time.

NOTE

The factory default to extend a phase is 10 seconds. This default can be changed by a service representative to suit the requirements of your facility.

2. To increase the phase by a longer increment, touch EXTEND PHASE TIME one or more additional times. The length of the phase is extended by the preset amount each time you touch the button.
   For example, touch EXTEND PHASE TIME three times to increase the length of the phase by 30 seconds.

Stopping during a Cycle

Refer to “Emergency Stop” on page 3-11 for instructions on stopping a cycle during a cycle.

Draining the Holding Tank and Sump

The holding tank and sump are normally drained at the end of the cycle specified by the TANK CYCLE COUNT. If you have to empty the tank and sump before that time, the DRAIN TANK/SUMP button enables you to do it manually.

To drain the sump and holding tank.

1. On the Main panel, touch DRAIN TANK/SUMP.
   The button label changes to TANK/SUMP DRAINING until all the solutions are emptied from the sump and the holding tank.
   When the tanks are empty, the label changes back to DRAIN TANK/SUMP.

Shutting Down the Washer

The procedure below assumes that you are performing a normal shutdown of the washer and that the last cycle has been allowed to run to completion.

To shut down the washer.

1. Drain the holding tank and sump (“Shutting Down the Washer” on page 3-10).
2. Set the CONTROL POWER ON OFF/RESET switch to OFF.
   The START button on the Main panel changes to CONTROL POWER IS OFF.

Emergency Stop

- *Burn hazard. Do not open a washer door for at least 30 seconds after stopping a processing cycle that was running a wash or rinse phase. This delay allows time for the spray manifolds to stop functioning. Otherwise, hot water could spray out of the door opening, resulting in burns to personnel.*
- *Burn hazard. Do not enter a washer compartment immediately after stopping a processing cycle that have been running a drying phase. Allow sufficient time for all metal surfaces within the compartment to cool. Otherwise, hot surfaces may contact and cause burns to personnel.*

Emergency Stop Using the ABORT CYCLE Button

To perform an emergency shutdown of the washer using the ABORT CYCLES button.

1. On the In Cycle panel (refer to Figure 3–7 on page 3–6), touch ABORT CYCLE.
   The cycle stops immediately and the Main panel appears.
2. If it is necessary to shut down the washer, set the CONTROL POWER ON OFF/RESET switch to OFF.
   The START button on the Main panel changes to CONTROL POWER IS OFF.

When the CONTROL POWER ON OFF/RESET switch is set to OFF, the touch control panel remains in its current state, but all panel functionality is lost. When you set the switch back to ON, the Main panel may display messages corresponding to faults that you must clear before you can continue using the washer.

3. When you are ready to start the washer again, set the CONTROL POWER ON OFF/RESET switch to back to ON.
   The START button appears on the Main panel.
4. Touch START to restart the cycle from the beginning.

Emergency Stop Using the CONTROL POWER ON OFF/RESET Switch

To perform an emergency shutdown of the washer using the CONTROL POWER ON OFF/RESET switch.

1. Set the CONTROL POWER ON OFF/RESET switch to OFF.
   The washer stops operating and the Main panel appears, and the START button changes to CONTROL POWER IS OFF.

NOTE

When the CONTROL POWER ON OFF/RESET switch is set to OFF, the touch control panel remains in its current state, but all panel functionality is lost. When you set the switch to ON, the Main panel may display messages corresponding to faults that you must clear before you can continue using the washer.

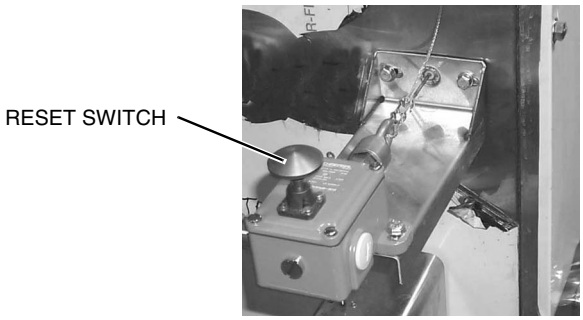
2. When you are ready to start the washer again, set the CONTROL POWER ON OFF/RESET switch to back to ON.
   The START button appears on the Main panel.
3. Touch START to restart the cycle.

Resetting the Emergency Stop Switch

If the washer was stopped by pulling on the emergency stop cable inside the washer, you must reset the switch before you can resume washer operation.

To reset the emergency stop switch, press the reset button on the switch. The emergency stop switch is mounted on the outside service-side wall at the load end of the washer.

Figure 3–8. Emergency Stop Switch Reset Button



Operating the Liquid Supply Dispensers

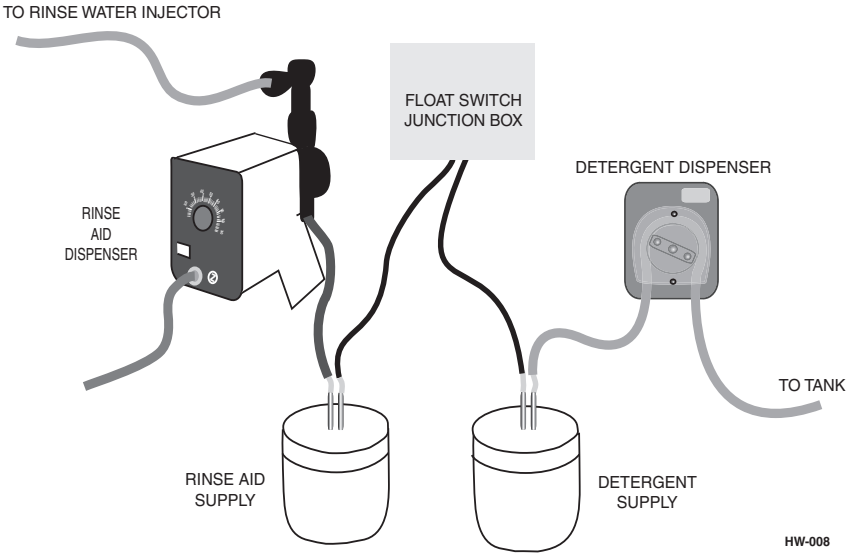
Description

While the washer's holding tank is filling for the first cycle, the detergent dispenser automatically pumps liquid detergent into the hot water supply in the tank. The dispenser operates for a period that depends on the flow rate of the pump, which is measured when the washer is installed, and the desired concentration of detergent in the wash water. During the drying phase, the holding tank is replenished with detergent for another period of time.

Also during the rinse phase, rinse aid is injected directly into the rinse water before it is sprayed over the load in the washer.

Dispenser System Components

Figure 3–9. Liquid Supply Dispenser System



Checks Prior to Routine Operation

Before starting a cycle:

- Make sure that the dispensers contain a sufficient supply of detergent or rinse-aid.
- Make sure the end of the dispenser's tubing/float switch assembly is properly inserted into the correct liquid supply container.

Prime a Dispenser Pump

Use this procedure when the supply is initially set up, when you change the liquid supply, or any time the dispenser tubing is empty.

1. Insert the float switch assembly into the dispenser's liquid supply container.
2. On the Main panel, touch SUPERVISOR AND SERVICE SCREEN.
   A numeric keypad panel appears.
3. Type the supervisor password and touch Enter.
   The Supervisor panel appears.

Figure 3–10. Supervisor Panel

3-10b

4. On the panel, touch the PRIME RINSE AID PUMP or PRIME DETERGENT PUMP button.
   The button's label changes to RINSE AID/DETERGENT PUMP PRIMING.
5. When the liquid supply is discharged into the outlet tubing, touch the button again to stop the priming action.
6. Repeat steps 4 and 5 to prime the other dispenser.
7. Touch GO TO MAIN SCREEN to return to the Main panel.

Replace a Liquid Supply

To replace the detergent or rinse aid supply:

1. Remove the float switch tube from the empty liquid container.
2. Remove the cap for the replacement container.
3. Place the float switch into the container. If necessary, refer to "Prime a Dispenser Pump" on page 3-14.

Enter the Detergent Concentration

The processor determines how long to pump detergent into the holding tank based on the flow rate of the pump and the recommended concentration of detergent. To enter the detergent concentration:

1. On the Main panel, touch SUPERVISOR AND SERVICE SCREEN.
   A numeric keypad panel appears.
2. Type the supervisor password and touch Enter.
   The Supervisor panel appears.

Figure 3–11. Supervisor Panel

3-11

3. On the panel, touch DETERGENT CONCENTRATION.
   A numeric keypad panel appears.
4. Enter the recommended detergent concentration in ounces per gallon.
5. Touch Enter and then Done.
6. Touch GO TO MAIN SCREEN to return to the Main panel.

Supervisor Operations

Programming a Cycle

The washer enables you to select from four independent processing cycles. These cycles are preset with the time and temperature values listed in Table 3–2 below. You can retain these values or change them as desired to meet your specific needs.

Table 3–2. Factory Preset Cycles

PHASE VALUE	CYCLE			
	1	2	3	4
Wash Time (seconds)	120	120	120	30
Wash Temperature (°F)	150	150	150	40
Rinse Time (seconds)	60	60	60	10
Rinse Temperature (°F)	180	180	180	40
Pure Rinse Time (seconds)	30	30	30	10
Pure Rinse Temp. (°F)	180	180	180	40
Drying Time (seconds)	900	900	900	10
Drying Temperature (°F)	230	230	230	50
Exhaust Time (seconds)	60	60	60	10
Floor Tilt	On	On	On	On

NOTE ▶

Most of the initial settings for Cycle 4 are below the minimum setpoints and are used for testing during setup and installation. If you change these out-of-range values, you cannot recover them.

To program a cycle.

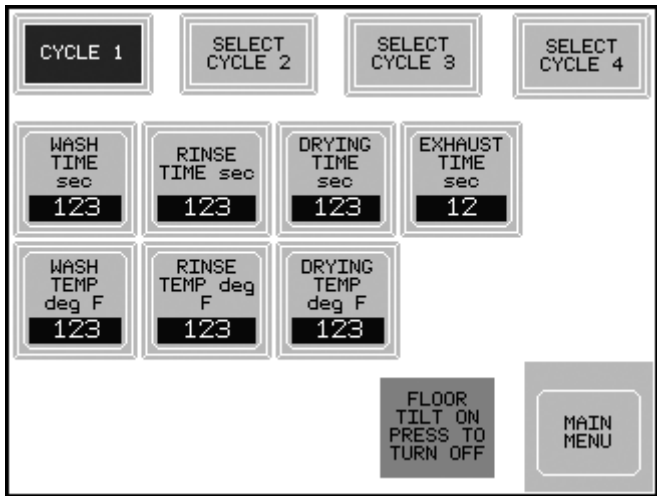
1. On the Main panel, touch CYCLE REVIEW AND PROGRAM.

NOTE ▶

You can only program a cycle that is not protected. If the cycle that you want to program is protected, its button is labeled CYCLE REVIEW ONLY. You must change it to unprotected using the Supervisor panel (refer to “Protect or Unprotect a Cycle” on page 3-24).

The Cycle Setup panel (Figure 3–12) appears.

Figure 3–12. Cycle Setup Panel



2. If necessary, touch one of the SELECT CYCLE buttons to select the cycle you want to program.
   The TIME and TEMP buttons display the current setpoint values for the phases of the selected cycle.
   Table 3–3 lists the time and temperature values that are allowed for each phase.

Table 3–3. Phase Time and Temperature Values

PHASE/FEATURE	TIME	TEMPERATURE
WASH	0 to 900 seconds (15 minutes)	120 to 185°F
RINSE	60 to 180 seconds (1 to 3 minutes)	120 to 180°F
PURIFIED RINSE	30 to 180 seconds (3 minutes)	120 to 180°F
DRYING	60 to 900 seconds (1 to 15 minutes)	200 to 240°F
EXHAUST	0 to 99 seconds	Does not apply.

NOTE

The Cycle Setup panel displays either the RINSE TIME and the RINSE TEMP buttons or the PURIFIED RINSE TIME and the PURIFIED RINSE TEMP buttons, depending on whether the purified rinse option is installed.

For each value that you want to change:

3. Touch the button for the setpoint.

The numeric keypad panel for that setpoint appears.

4. Type the new value, touch Enter, and then touch Done.
5. Repeat steps 4 and 5 for each setpoint that you want to change.
6. To turn the floor tilt feature on or off, touch the FLOOR TILT button.
7. Repeat steps 3 through 8 to program other cycles.
8. Touch MAIN MENU.
   The Main panel appears.

Disable Low Dispenser Supply Faults

The washer reports an error if the detergent or rinse aid supplies run low. If you do not override this fault, the washer does not start the next cycle until you refill the appropriate liquid supply and reset the fault. You can override this error condition using the DISABLE LOW RINSE AID FAULT and DISABLE LOW DETERGENT FAULT buttons on the Supervisor panel.

CAUTION

The washer runs when the rinse aid or detergent supply is empty and if the corresponding RINSE AID or DETERGENT FAULT OVERRIDE is set. Operating the washer without these chemicals reduces the washer's cleaning ability.

1. On the Main panel, touch SUPERVISOR AND SERVICE SCREEN.
   A numeric keypad panel appears.
2. Type the supervisor password and touch Enter.
   The Supervisor panel appears.

Figure 3–13. Supervisor Panel

3-10

3. Touch DISABLE LOW RINSE AID FAULT or DISABLE LOW DETERGENT FAULT, or both, to disable the faults.

NOTE

When the faults are disabled, the dispenser indicators on the Main, Cycle Setup, Cycle Review, and In Cycle panels display DETERGENT/RINSE AID LOW FAULT OVERRIDE ON.

4. Touch GO TO MAIN SCREEN.
   The Main panel appears.

Change the Tank Cycle Count

1. On the Main panel, touch SUPERVISOR AND SERVICE SCREEN.
   A numeric keypad panel appears.
2. Type the supervisor password and touch Enter.
   The Supervisor panel appears.

Figure 3–14. Supervisor Panel

3-10

3. Touch TANK CYCLE COUNT.
   A numeric keypad panel appears.
4. Enter the tank cycle count, touch Enter, and then touch Done.

CAUTION

When you change the tank cycle count, you must drain the tank before starting another cycle. The tank cycle count is reset to the new count, regardless of how many cycles have already been run with the wash solution currently in the tank. Failure to drain the tank can reduce the effectiveness of the washer cycles.

5. Touch ENTER TANK CYCLE COUNT CHANGE.
6. Touch GO TO MAIN SCREEN.
   The Main panel appears.

Change the Supervisor Password

To change the supervisor password.

1. On the Main panel, touch SUPERVISOR AND SERVICE SCREEN.
   A numeric keypad panel appears.
2. Type the supervisor password and touch Enter.
   The Supervisor panel appears.

Figure 3–15. Supervisor Panel

3-10

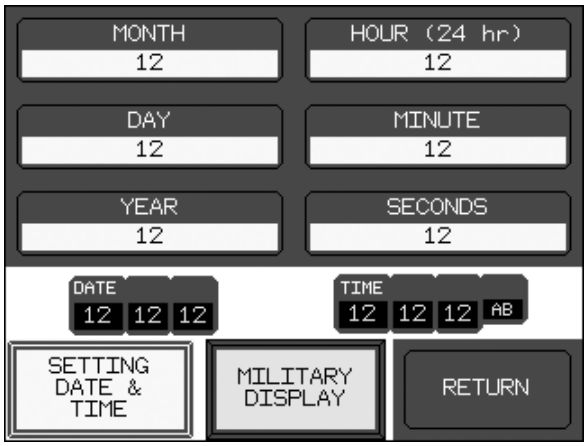
3. Touch CHANGE SUPERVISOR PASSWORD.
   A numeric keypad panel appears.
4. Type the new supervisor password (any number from 1 to 30000) and touch Enter.
   The changed password appears above the keypad.
5. Touch Done.
   Your change is saved and you are returned to the Supervisor panel.
6. Touch GO TO MAIN SCREEN.
   The Main panel appears.

Set the Time and Date

To program the time and date for the washer.

1. On the Main panel, touch SUPERVISOR AND SERVICE SCREEN.
   A numeric keypad panel appears.
2. Type the supervisor password and touch Enter.
   The Supervisor panel (Figure 3–15 on page 3–21) appears.
3. Touch SET TIME AND DATE.
   The Time and Date panel (Figure 3–16) appears.

Figure 3–16. Time and Date Panel



The panel displays the date and time currently set for the washer. For each value that you want to change:

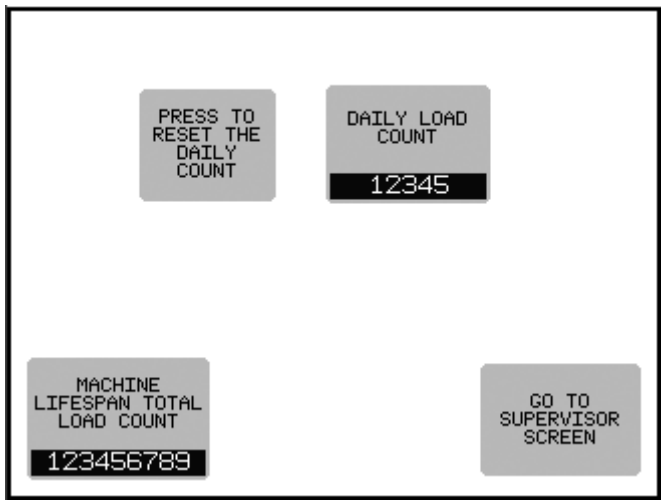
4. Touch the button for the value you want to change.
   The numeric keypad panel for that value appears.
5. Type the new value, touch Enter, and then touch Done.
6. Repeat steps 4 and 5 for each value that you want to change.
7. Touch SET DATE AND TIME.
   Your changes are saved.
8. If desired, touch the STANDARD DISPLAY/MILITARY DISPLAY button to toggle from one to the other.
9. Touch RETURN.
   You are returned to the Supervisor panel.
10. Touch GO TO MAIN SCREEN.
    The Main panel appears.

Reset the Daily Load Count

To reset the load count.

1. On the Main panel, touch SUPERVISOR AND SERVICE SCREEN.
   A numeric keypad panel appears.
2. Type the supervisor password and touch Enter.
   The Supervisor panel (see Figure 3–15 on page 3–21) appears.
3. Touch GO TO DAILY CYCLE COUNT.
   The Cycle Counts panel appears.

Figure 3–17. Cycle Counts Panel



4. Touch PRESS TO RESET THE DAILY COUNT.
   The counter is reset to 0.
5. Touch GO TO SUPERVISOR SCREEN.
   The Supervisor panel appears.
6. Touch GO TO MAIN SCREEN.
   The Main panel appears.

Protect or Unprotect a Cycle

To change a cycle to either protected or unprotected.

1. On the Main panel, touch SUPERVISOR AND SERVICE SCREEN.
   A numeric keypad panel appears.
2. Type the supervisor password and touch Enter.
   The Supervisor panel (see Figure 3–15 on page 3–21) appears.
3. Touch the desired CYCLE button to toggle the cycle between protected and not protected.
4. Touch GO TO MAIN SCREEN.
   The Main panel appears.

Section 4 Maintenance

General Maintenance Schedule

PERFORMANCE ASSURANCE PLAN

Preventive maintenance performed by factory-trained service representatives, using authorized parts and service techniques, is recommended. Recognizing symptoms of potential trouble and making corrections immediately is less costly and time consuming than repairing damaged equipment. Our Performance Assurance Plan offers scientific maintenance, not merely repair service.

For quality service on this equipment and information on our Performance Assurance Plan, contact Getinge USA, Inc. 1777 East Henrietta Road, Rochester, NY 14623-3133 or call 1-800-950-9912.

The customer is responsible for the following maintenance items at the intervals specified. Optional items may require additional maintenance.

Table 4–1. Maintenance Schedule

Maintenance Item	Interval	See Page:
• Loading Printer Paper (option)	When Required	4-2
• Inspect and Clean Washer Surfaces • Check Liquid Supplies • Clean the Sump Debris Screen • Clean the Tank Debris Screen	Daily	4-2 4-2 4-2 4-3
• Clean the Screen on the Return Pump Low Suction Collar	Weekly	4-4
• Flush Spray Manifold • Check Supply Hoses • Check Dispenser Pump/Tubes • Descale Sump	Monthly	4-5 4-5 4-5 4-6
• Check and Clean Steam Traps • Check and Clean Y-Strainers	Every 6 Months	4-7 4-7
• Change the PLC Battery	Annual	4-7

Routine Maintenance Schedule

When Required

Loading Printer Paper

See “Paper Roll Loading” on page A-2.

Daily

Inspect and Clean Washer Surfaces

1. Inspect the exterior and interior surfaces of the washer.
2. Clean with mild detergent and a soft, damp cloth.

Check Liquid Supplies

1. Check the detergent and rinse-aid supply containers.
2. Refill or replace if required.

Clean the Sump Debris Screen

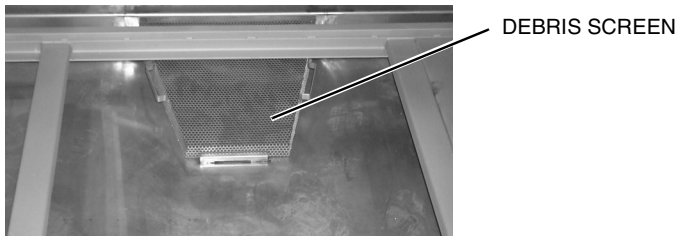
Remove and clean the debris screen that covers the sump.

1. Lift out the middle floor grate.

NOTE ▶

A floor grate weighs approximately 30 lb.

Figure 4–1. Sump Debris Screen



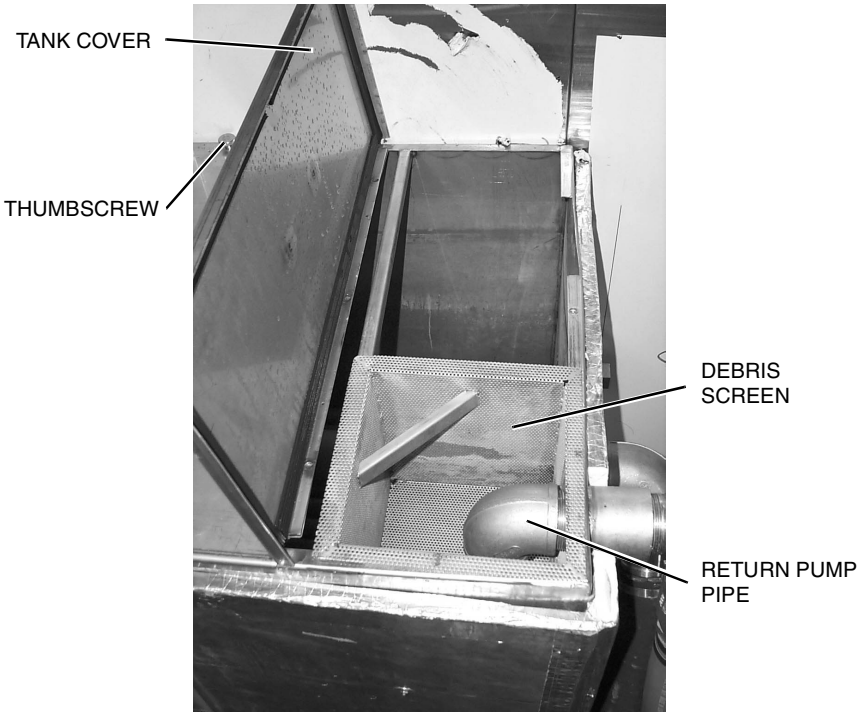
2. Lift the debris screen out of the washer.
3. Clean the screen by rinsing with water.
4. Install the screen back into the washer starting with the last screen that you removed.
5. Install the floor grate back into the washer.

Clean the Tank Debris Screen

To clean the debris screen in the tank.

1. Loosen the thumbscrew securing the cover to the tank and open the cover.

Figure 4–2. Tank Debris Screen

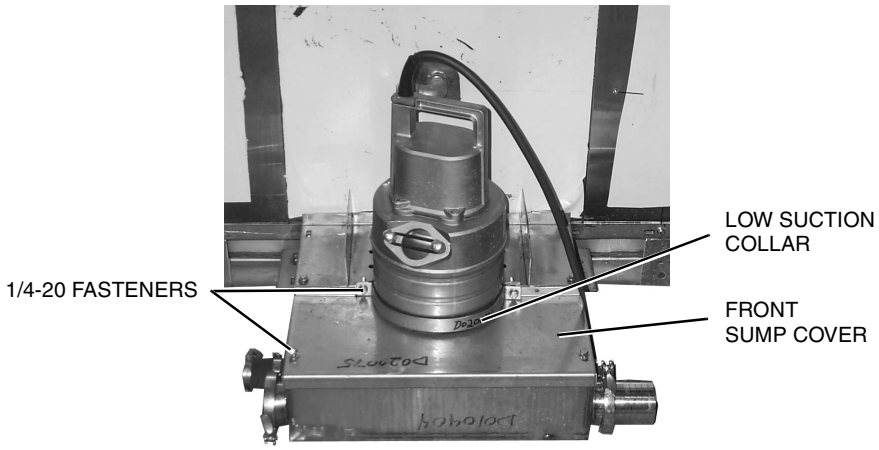


2. Slide the debris screen away from the return pump pipe and lift the debris screen out of the tank.
3. Clean the screen by rinsing with water.
4. Place the screen in the tank and slide over the return pump pipe.
5. Close the door and secure the cover to the tank with the thumbscrew.

Weekly

Clean the Screen on the Return Pump Low Suction Collar

Figure 4–3. Remove Return Pump Cover



1. Remove the two 1/4-20 fasteners that secure the low suction collar to the pump.
2. Remove the two 1/4-20 fasteners that secure the front sump cover and remove the cover.
3. Slide the low suction collar up out of the sump and wipe away any debris that is built up on the screen.
4. Place the collar back down into the sump and replace the cover and secure the low suction collar to the pump.

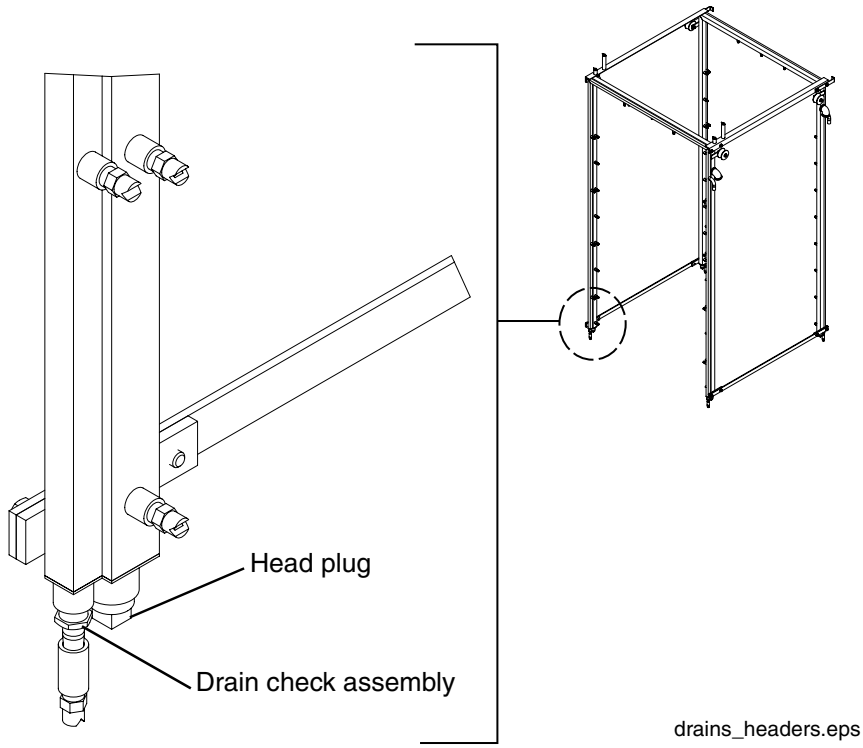
Monthly

Flush Spray Manifold

Flushing the spray manifold removes any fine debris that may have accumulated in the assembly due to the recirculation of wash/rinse water during routine operation.

1. Remove the hex head plug or drain check assembly from the bottom of each manifold leg.

Figure 4–4. Manifold Head Plug and Drain Check Assembly



2. Run a processing cycle with the compartment empty.
3. Reassemble the hex head plugs to the manifold legs.

Check Supply Hoses

1. Check the supply hoses for heat cracks, cuts, or other evidence of deterioration.
2. If replacement is required, notify qualified service personnel.

Check Dispenser Pump/Tubes

1. Check the pump rollers and the supply tubing on the detergent and rinse-aid dispensers.
2. If components show evidence of wear, notify qualified service personnel for replacement.

Descale Sump

Descale the sump and steam heating coil surfaces to prevent a buildup of mineral deposits. Contact your Getinge/Castle Service Technician for an appropriate scale remover and follow the directions for its use.

1. Turn the detergent and rinse-aid dispensers off by removing the power cables from connectors J23 and J24 on the control box.
2. Select a cycle and reprogram it as follows (if necessary, refer to “Programming a Cycle” on page 3-16):
   a. Set the DRYING time to the minimum setpoint (60 seconds).
   b. Set the WASH time and temperature according to the descaler manufacturer’s recommendations.
   c. Set the RINSE (or PURE RINSE) time for the recommended descaler flushing (180 seconds maximum).
3. Drain any water from the sump.
4. Open the washer door and remove one of the middle floor grates.

NOTE ▶

A floor grate weighs approximately 30 lb.

5. Lift out the debris screen and add descaler to the sump.
6. Close the door and start the descaling cycle. Descaling occurs during the WASH phase of this cycle. Flushing occurs during the RINSE phase.
7. Run a few more cycles, using both wash and rinse water, to ensure a complete flush of the descaler.
8. After flushing is complete, turn the dispensers back on and re-program the cycle.
9. Replace the debris screen and the floor grate.

Every Six Months

Check and Clean Steam Traps

1. Check all steam traps.

NOTE

This task should be performed by qualified service personnel.

2. Clean if required.

Check and Clean Y-Strainers

1. Check the filter screens in all plumbing supply lines.

NOTE

This task should be performed by qualified service personnel.

2. Clean if required.

Every Year

Change the PLC Battery

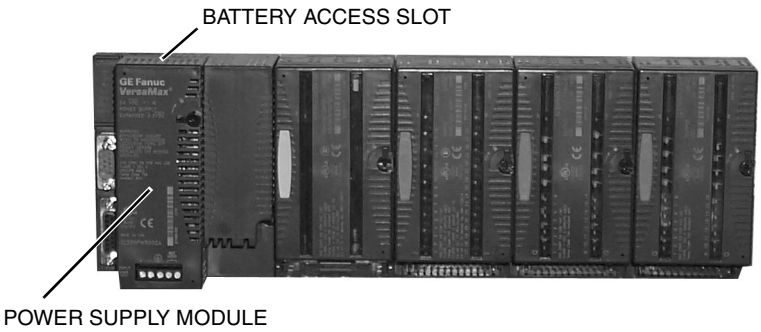
A lithium battery maintains the contents of the CMOS RAM memory in the CPU. If the battery loses its charge, your washer settings may be corrupted or lost.

CAUTION

When power is removed from the washer, a capacitor in the PLC applies a charge to the RAM to maintain the washer settings for a short period of time (10 to 15 minutes). After removing the old battery, you should install the replacement as soon as possible.

1. Remove power from the washer.
2. Open the control box cover to provide access to the PLC.

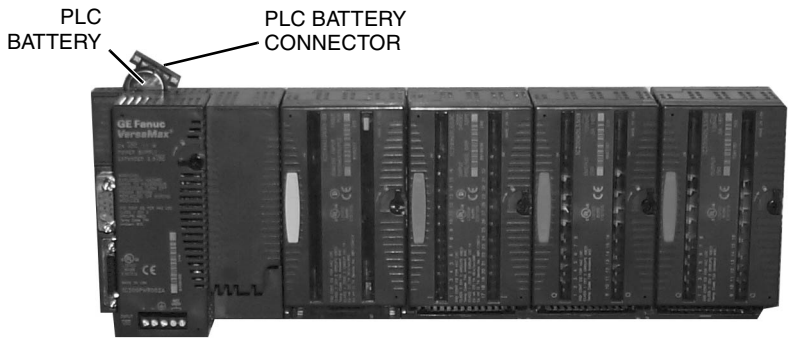
Figure 4–5. PLC Modules



3. Disconnect the TCP cable from the front of the power supply module.

4. Using a small flat-head screwdriver, pry open the battery access slot on the top of the power supply module and pull the holder out.

Figure 4–6. PLC Battery



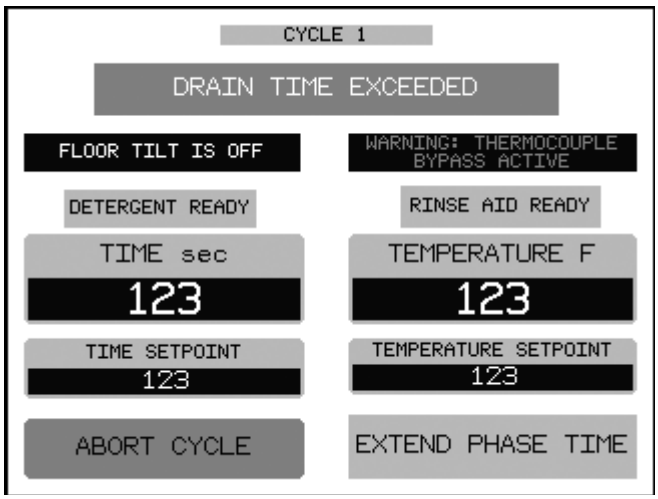
5. Remove the battery and install its replacement. Ensure the plus (+) side of the battery faces the front of the PLC.
6. Push the battery holder back into the slot.
7. Connect the TCP cable to the front of the power supply module.
8. Close the control box door and restore power to the washer.

Section 5 Troubleshooting

Error Messages

If an error occurs that forces the cycle to stop, the Main panel will be displayed and the error will be displayed (Figure 3–5 on page 3–5). If an error condition occurs that does not force the cycle to stop, the error will be displayed on the In Cycle panel as illustrated in Figure 5–1 below.

Figure 5–1. Processing Error Message



The panel reports the current status of the processing cycle along with the error. For record purposes, the current load count is displayed. There is also a FAULT RESET button on the Main panel that, in a few cases, enable you to reset the error and restart the cycle.

Most faults first require a change or fix to a defective component. Once the problem has been corrected, you can then use the FAULT RESET button on the Main panel to clear the error.

Resetable Error Messages

A list of resetable error messages is provided in Table 5–1 below.

Table 5–1. In-Cycle Resetable Error Messages

MESSAGE	COLOR	EXPLANATION
DRAIN TEMPERING TIMEOUT	Red	There is a problem with the cold water supply.
DRAIN TIME EXCEEDED	Red	Most likely, there is a clogged drain.

Table 5–1. In-Cycle Resetable Error Messages

MESSAGE	COLOR	EXPLANATION
DRYER TEMPERATURE TIMEOUT	Red	There is a problem with the steam supply.
FLOOR POSITION FAILURE	Red	There is a jammed floor panel or a bad switch.
EMERGENCY CORD BROKEN	Red	The emergency stop cable is broken or has come loose.
MACHINE FAULTED CORRECT FAULT AND PRESS FAULT RESET	Red	There is a problem that you must correct before you can continue to use the washer or a problem occurred but the washer corrected itself.
RINSE PRESSURE FAULT	Red	There is a problem with the rinse pump or with the hot water supply.
RINSE TEMPERATURE TIMEOUT	Red	There is a problem with the steam supply to the booster heater.
SPRAY MANIFOLD JAMMED	Red	An item from the load has jammed movement of the manifold.
TANK/WASH FILL TIMEOUT	Red	There is a problem with the water supply or the drain is open.
TANK LEVEL FAULT	Red	The tank level has dropped below the low level sensor because water is not being returned to the tank.
WASH TANK HAS FAILED TO MAINTAIN TEMPERATURE	Red	There is a problem with the steam supply.
WASH TEMPERATURE TIMEOUT	Red	There is a problem with the steam supply.

To recover from an error:

1. Fix the problem that was causing the error condition. On the Main panel, touch FAULT RESET.
   The alarm is extinguished.
2. Touch START to restart the cycle.

If the condition persists and the message occurs again:

1. Set the CONTROL POWER ON OFF/RESET switch to OFF.
2. Notify qualified service personnel.

Non-resetable Error Messages

A list of non-resetable error messages is provided in Table 5–2 below.

Table 5–2. In-Cycle Non-resetable Error Messages

BOOSTER TEMPERATURE ZONE FAILURE
DRAIN TEMPERATURE ZONE FAILURE
DRYER BLOWER MOTOR OVERLOAD
DRYER TEMPERATURE ZONE FAILURE
MULTIPLE TEMPERATURE ZONE FAILURES
RECIRCULATION PUMP MOTOR OVERLOAD
RINSE PUMP OVERLOAD
RINSE TEMPERATURE ZONE FAILURE
WASH PUMP MOTOR OVERLOAD

The FAULT RESET button on the Main panel will not clear the fault message until the problem is resolved.

1. Set the CONTROL POWER ON OFF/RESET switch to OFF.
2. Notify qualified service personnel.

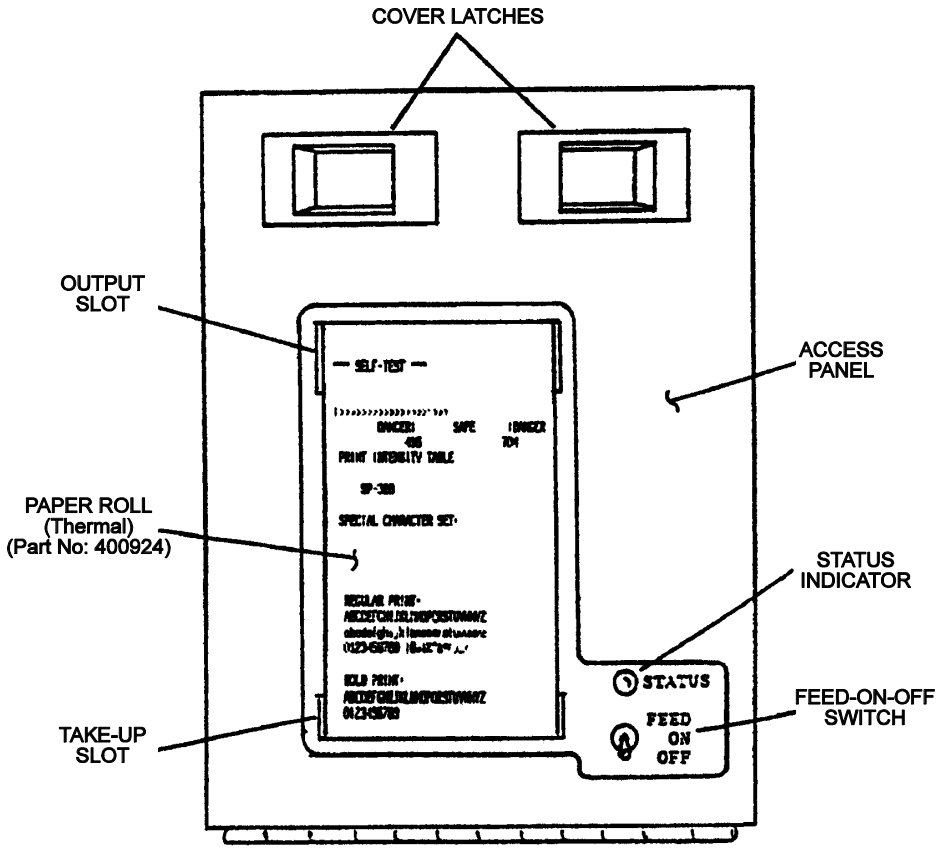
Appendix A Recorder/Printer

The optional recorder/printer provides a record of pertinent cycle data for each processing cycle that runs on the washer. Pertinent data includes cycle identification, programmed phase setpoints, phase performance, date, and time.

The recorder/printer is equipped with a thermal array print head that is capable of printing at a paper feed rate of 1.3 inches per second. The use of this type of print head eliminates the need for print ribbon cartridges.

Description

Figure A–1. Recorder/Printer



Refer to Figure A–1.

FEED/ON/OFF Switch — Turns the recorder/printer on and off. When you hold the switch in the FEED position, the switch rapidly advances the paper through the recorder/printer.

STATUS Indicator — The indicator lights:

- green when the recorder/printer is turned on.
- green/yellow when the paper roll supply is low.
- yellow when the paper roll supply is empty.

Paper Roll — Carries the printed record of cycle data. One roll is 100 feet long by 2.35 inches wide.

Output Slot — Issues the paper after it has passed through the printer.

Input Slot — Channels the paper to the printer's take-up roll.

Access Panel — Permits access to the printer. The panel is latched at the top and hinged at the bottom.

Cover Latches — Secure the access panel to its mounting frame. Pushing the spring-loaded latches toward each other releases the panel for access to the printer.

Paper Roll Loading

If the paper roll runs out, the status indicator displays a yellow light and the printer sounds an intermittent alarm. Refer to Figure A–2.

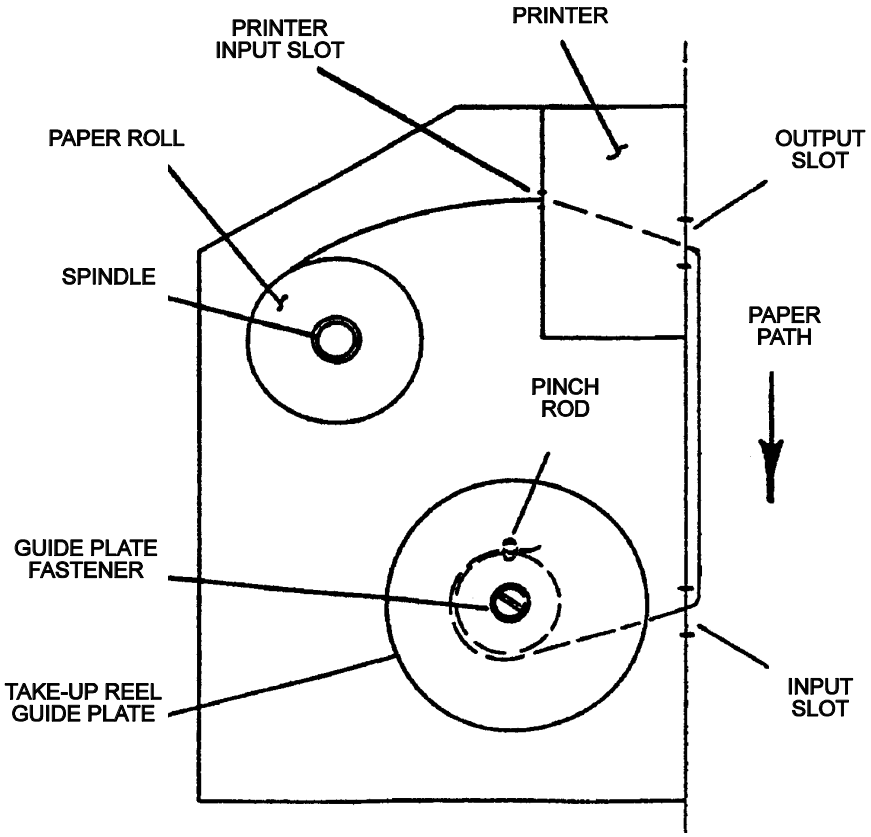
NOTE

Do not operate the printer without paper. If replacement rolls are not available, turn the printer OFF.

1. Set the FEED ON OFF switch to ON.
2. Push the spring-loaded cover latches inward to release the access cover and open the printer.
3. Install a new paper roll (thermal side facing out) on the paper roll spindle.
4. Fold the end of the paper back on itself to form a straight and clean edge.
5. Insert the end of the paper into the printer input slot.
   The printer automatically feeds the end of the paper through the parenthood mechanism.
   The automatic feed stops after about an inch of paper has issued through the output slot.

6. Turn the FEED ON OFF switch to the FEED position and hold until approximately 12 inches of paper is discharged from the output slot.
7. Run the end of the paper through the access cover's input slot and wrap it around the take-up reel.
8. Reassemble the guide plate onto the take-up reel, aligning the pinch rod with the pinch rod slot so that it captures the paper and holds it securely to the reel.
9. After reassembly, manually rotate the reel clockwise to take up any slack in the paper.
10. Close the access door.

Figure A–2. Paper Roll Loading



Operation

Operation of the recorder/printer is automatic and does not require the attention of personnel other than for routine replacement of the paper roll (see page A–2).

NOTE

- *Do not operate the printer without paper.*
- *The final few feet of a paper roll are shaded red to indicate that the supply is running out. You should replace the roll when the shading appears.*

Self-Test

To initiate a diagnostic self-test:

1. Set the FEED ON OFF switch to OFF.
2. Move the switch back through the ON position to the FEED position, hold it there for several seconds, and then release the switch.

Feeding Paper without Self-Test

To feed paper through the printer without initiating a self-test:

1. Move the FEED ON OFF switch from the ON position to the FEED position and hold.
2. When desired, release the switch to stop the paper feed.

NOTE

Do not switch from the OFF position straight to the FEED position or a self-test occurs.

Appendix B Liquid Dispenser Setup

Successful cleaning of equipment by your washer depends on having the recommended amounts of detergent and rinse aid solution in the wash and rinse phases. This appendix provides instructions to ensure that the appropriate quantities of these solutions are used.

Determine the Detergent Dispenser Flow Rate

The processor controls the amount of time that the detergent dispenser pump runs when the tank is initially filled and again during the drying phase to replenish the detergent (after the wash solution has been diluted by the rinse water that is returned to the tank).

To determine how long the dispenser pump must run, you must register two values with the PLC. The first value is the recommended concentration of detergent in the wash solution. This value is entered via the Supervisor panel (refer to “Enter the Detergent Concentration” on page 3-15). The second value is the flow rate of the detergent dispenser pump. Since this value varies slightly from pump to pump, you must measure this value.

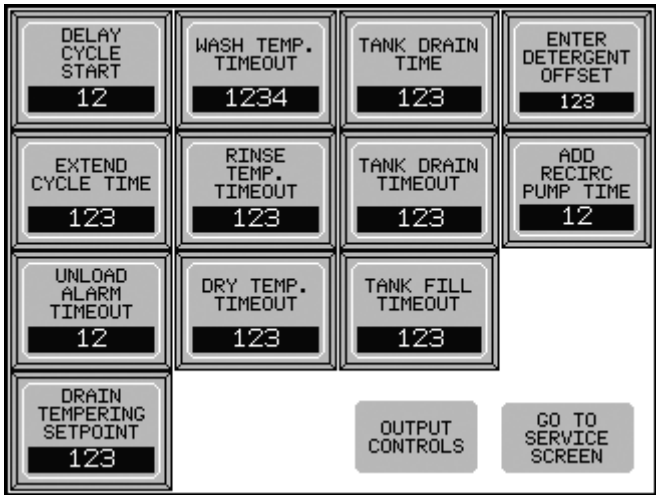
1. Calculate the detergent dispenser flow rate:
    a. Ensure that the detergent dispenser is fully primed and that liquid detergent is visible in the tubing at the discharge into the tank.
    If necessary, refer to “Prime a Dispenser Pump” on page 3-14.
    b. Disconnect the detergent dispenser tubing from the fitting on the tank and place the tubing into a 2-quart graduated cylinder.
    c. Use the PRIME DETERGENT PUMP button on the Supervisor panel to run the pump for the time necessary to pump 40 oz of detergent into the graduated cylinder. Record the time.
2. On the Main panel, touch SUPERVISOR AND SERVICE SCREEN.
    A numeric keypad panel appears.
3. Type the service password and touch Enter.

The Service panel appears.

Figure B–1. Service Panel

4. Touch SERVICE TIMERS.
   The Service Timers panel appears.

Figure B–2. Service Timers Panel



5. Touch ENTER DETERGENT OFFSET.
   A numeric keypad panels appears.
6. Enter the time (in seconds) that you calculated above in step 1, touch Enter, and then touch Done.
7. Touch GO TO SERVICE SCREEN.
   The Service panel appears.
8. Touch RETURN TO MAIN SCREEN OR RETURN TO RUN.
   The Main panel appears.

Rinse Aid Dispenser Calibration

Refer to Table B–1 on page B-4.

Rinse aid solution is injected directly into the rinse water. The desired flow rate of the rinse aid dispenser can be calculated from the concentration recommended by the rinse aid manufacturer and from the rinse water rate (10 gallons per minute).

1. Calculate the desired rinse aid dispenser flow rate.

   Multiply the recommended rinse aid concentration by the rinse water rate.
   Record your answer in Table B-1.

The dial on the front of the rinse aid dispenser enables you to adjust the flow rate of the dispenser. After you calculate the flow rate of the dispenser, you can use this dial to adjust the flow rate to ensure that the correct amount of rinse aid solution is injected into the rinse water.

If you have not yet used the rinse aid dispenser, set the dial to 22% as a starting point.

The rinse aid dispenser must be running when you adjust the dial. Adjusting the dial when the dispenser is not running can damage the dispenser.

2. Calculate the actual rinse aid dispenser flow rate.
   a. Fill a graduated cylinder about 3/4 full with rinse aid solution and record the amount in the cylinder.
   b. Ensure that the rinse aid dispenser is fully primed and that rinse aid solution is visible in the tubing at the rinse aid injector fitting.
      If necessary, refer to “Prime a Dispenser Pump” on page 3-14.
   c. Remove the float switch/suction tube from the rinse aid supply and place into the graduated cylinder.
   d. Use the PRIME RINSE AID PUMP button on the Supervisor panel to run the pump for a specified time (10 minutes, for example).
      If necessary, refer to “Prime a Dispenser Pump” on page 3-14.
   e. Remove the tube from the graduated cylinder and measure the volume of liquid that was pumped out of the cylinder.

f. Calculate the flow rate (volume / time) of the dispenser. Record your answer in Table B-1.

The rinse aid dispenser must be running when you adjust the dial. Adjusting the dial when the dispenser is not running can damage the dispenser.

3. If necessary, adjust the dial and repeat step 2.

Table B–1. Rinse Aid Calculations

STEP	EXAMPLE	RESULT
1. Calculate desired dispenser flow rate: *Rec. conc. x rinse water rate*	0.031 oz/gal x 10 gal/min = 0.31 oz/min	
2. Calculate actual dispenser flow rate: *Qty pumped / time*	3 oz / 10 min = 0.3 oz/min	

Appendix C Consumable Stock and Spare Parts

Consumable Stock

To order the items listed in Table C-1, contact your Getinge, USA representative or call: 1-800-950-9912.

Table C–1. Consumable Stock

DESCRIPTION	PART NO.
Printer Paper	400924
Lustre Stainless Steel Cleaner/Polish (18 oz.)	61301600026
Getinge Tec Wash III Instrument Detergent	
• 5 gallon container	61301667776
• 15 gallon container	61301667777
Getinge Rinse	
• 5 gallon container	61301664156
• 15 gallon drum	61301664157

Spare Parts

Table C–2. List of Recommended Spare Parts

SPARE PART DESCRIPTION	IDENTIFIER	TYPE	PART NUMBER
Fuse, 1A, Glass Fast Acting	14F, 16F, 21F, 27F, 38F, 43F	Fast Acting	2003036
Fuse, 2A, Glass Fast Acting	39F, 40F, 42F	Fast Acting	2003037
Fuse, 3A, Glass Fast Acting	26F, 28F	Fast Acting	2003038
Fuse, 8A, Glass Fast Acting	17F, 19F	Fast Acting	400300
Fuse, 10A Glass Fast Acting	24F	Fast Acting	2003045
Fuse, Fast Blow, 15A, WESCO, ABC15	15F	Fast Acting	2003037
Drain Valve			Y830020
Rebuild Kit, 1/2" Water Valve			9101008
Rebuild Kit, 1" Water Valve			9101048
Rebuild Kit, 1" Steam Valve			9101009
Rebuild Kit, 1 1/2" Steam Valve			9101004
Rebuild Kit, 3/4" Steam Valve			61301604962
1/2" Vacuum Breaker			3005029
3/4" Vacuum Breaker			3005028
3/4" Steam Trap (Sump)			3006009
Rebuild Kit, 3/4" Steam Trap (Dryer Only)			27557
Rebuilt Kit, 1/2" Steam Trap (Heat Exchanger)			ZTRAP0011
Door Gasket, Top/Non-Hinge Side (10 ft per door)			3021015
Door Gasket, Hinge Side (7 ft per door)			400163
3/4" Torque Limiter			6003001
Long Wear Sleeve			X740038
Short Wear Sleeve			X740037
Thermocouple			401126
Window for Interior Light			Y950312
Gasket for Y950312			Y950311
Squeeze Tube for Beta Pump			9112005
Level Control, Dual Function			2011001

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